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VOLUME XXXIV A.

MUZAFFARGARH DISTRICT,

1908.

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PREFACE.

UNDER the old arrangement, I collected the materials necessary for a revised edition of the Gazetteer and brought the first edition as much up-to-date-as was possible, during the currency of the recent Settlement operations, which ended on 2nd June 1903. Just before the close of the Settlement orders were received to the effect that the new Gazetteer was to be arranged quite differently from the old one, in accordance with a syllabus prepared by the Superintendent, Gazetteer Revision, Punjab. The changes were very radical and necessitated the re-writing of the whole Gazetteer. Since the completion of the recent Settlement of the district I have had my hands full first with the enquiry about occupiers' rates levied on the Western Jumna Canal and then with the Mianwali Settlement. I have devoted to this compilation such time during the past three years as I could spare without detriment to more important work. This accounts for the delay in completing the book. I have tried to bring every section up-to-date. In matters connected with land revenue and measurement, the figures of the Revised Settlement have been quoted. In some cases I have given figures of 1902-03 where more recent figures might as well have been substituted. The difference in these cases was however unimportant.

Part B of the Gazetteer consisting of statistical tables was prepared in the office of the Superintendent, Gazetteer Revision, and has been brought up-to-date. In compiling the present edition I have drawn largely upon the old Gazetteer which contained a great deal of information, on Mr. O'Brien's Settlement Report of the First Regular Settlement, my own Report of the Second Regular Settlement, my Assessment Reports of the tahsils and my Code of Customary Law of the district.

I have to offer my apologies for the shortcomings which are bound to depreciate the value of a book complied from time to time in what may be called spare hours.

LAHORE:
12th June 1908.

HARI KISHAN, KAUL.

P. S.—Since the Gazetteer was sent into Press, the Leiah tahsil had been transferred from the Mianwali to the Muzaffargarh district, with effect from 1st April 1909. For particulars relating to that tahsil the Gazetteer of the Mianwali district should be referred to.

LAHORE:
1st January 1910.

HARI KISHAN KAUL.

I have to offer my apologies
for my shortcomings which are bound to
depreciate the value of a book compiled [illegible]

CHAPTER I.—DESCRIPTIVE.

Section A.—Physical Aspects—Meteorology.

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Physical Aspects.

Name.

The district is called after the name of the town where its head-quarters are situated. Muzaffargarh literally means the fort of Muzaffar and is so called because the town lies inside the walls of a fort built by Nawáb Muzaffar Khan of Multán in A.D. 1794. Prior to that, the place was only known by a shop called Musan Hatti on the road leading from Multán to Dera Ghází Khan.

Area.

The Muzaffargarh district measuring 3,156 square miles lies between north latitude 29° 1′ and 30° 46,′ and east longitude 70° 33′ and 71° 49′, occupying the angle between the rivers Chenáb and Indus, whose junction constitutes the southern extremity of the district. It is bounded on the north by the Mianwali [1] and Jhang districts, on the east by the Multán district and the Bahawalpur State, and on the west by the Dera Ghazi Khan district. The boundary line on the east and west runs along the bed of the Chenáb and Indus rivers, respectively, and was changeable till lately with the deep stream. It has, however, been fixed at the recent settlement. The district, therefore, has fixed boundaries with the adjoining Native State and districts now, without regard to the vagaries of the rivers. The district is divided into three tahsils, of which that of Sináwán includes all the nothern portion of the district excepting a narrow strip along the right bank of the Chenáb, that of Alipur embraces the southern portion of district, and between them lies the tahsil of Muzaffargarh. The administrative head-quarters are situated at Muzaffargarh, six miles from the right bank of the Chenáb, on the road from Multán to Dera Ghází Khan.

Boundaries.

General Description.

This district forms the lower end of the Sindh-Ságar Doáb, and is in shape a long triangle, the eastern and western sides of which are formed practically by rivers Chenáb,[2] and Indus, respectively, the apex being placed about the junction of those rivers. The base of the triangle, which forms the northern boundary of the district, is about 55 miles long. The length of the triangle is 130 miles. The northern part of the district consists of the valley of the Indus on the west, the valley of the Chenáb on the east, and the sandy desert known as the Thal, in the center. The valley of the Indus is broader than the valley of the Chenáb. The main stream of the Indus has for years been receding to the west, and there is now a strip of good land about 15 miles wide lying between the Indus and the Thal. This strip is irrigated near the bank of the river by the annual inundation, and inland by inundation

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(1) The Leiah Tahsil which formed part of the Mianwali district has since the writing of this Gazetteer been attached to Muzaffargarh.

(2) The river though called Chenáb is really Trimmú or the trio (Ravi, Chenáb and Jhelum) in the upper half of the district and Panchnad or the five rivers of the Punjab in the lower half.

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Physical Aspects.

canals. The valley of the Chenáb is deeper but not so broad, and does not seem subject to such great alterations as that of the Indus.

The *Thal.*

The two river valleys are separated by the sandy desert which occupies so large an area of the Sind-Ságar Doáb, and is locally known as the *thal.* The *thal* like the district, is triangular in shape with its apex to the south. The sides of the triangle are about 50 miles long, its base 34 and its area about 1,000 square miles. The western part of the *thal* consists of a sandy soil with occasional sand-hills. As we go east, the sand-hills are more numerous, and higher. They run north and south in detached ridges, and are separated from one another by long strips and basins of stiff clay. These ridges rise higher and higher until they abruptly end at the edge of the Chenáb valley. The *thal* is at all times the grazing-ground of large numbers of camels, and, except during drought, of herds of sheep and goats. When rain falls, good grass springs up at once and large herds of horned cattle come into the *thal* for pasture. Water is everywhere brackish and bitter even in the wells locally called sweet. *Thal* residents prefer their own bitter water and complain of the sweet water of the other parts that it has no taste. The strips and basins of good clay that lie between the sand-hills are cultivated with great care. On account of the surrounding sand-hills the owner cannot extend his cultivation, and he makes the most of his little oasis. The soil is very highly manured and mixed with sand, locally called *panán,* from the neighbouring sand-hills. To secure abundant manure besides the supply afforded by the owner's cattle, he hires flocks of goats and sheep to make his fields their night quarters on payment of a small amount of grain. This payment is called *áhalí,* and the rate is a quarter of a *ser* of wheat per score of sheep and goats for each night. The water-courses are made perfectly straight, are V shaped, and are carefully plastered with clay and straw to prevent leakage. The fields are laid out in small beds, which are perfect rectangles in shape. Nothing can be neater or can show more careful farming than the lands of a *thal* well. The irrigation is from wells helped by rain. Manure and rain are indispensable to ripen a crop. The owner of each well keeps a herd of sheep and goats. If rain does not fall there is no grass for the well-cattle or for the sheep and goats. The wells have to be stopped and the cattle are taken to the banks of the rivers, and there is consequently no manure. Thus, if there is no rain there is no manure, and consequently no crop. If the rainfall is abundant the wheat crop in the *thal* is heavier than in any part of the district. Though the *thal* is so inhospitable, and agricultural life in it so hard, yet the people thrive on it. Nowhere else are such fine strapping men and women, and such plump, healthy children, to be seen. The *thal* is not a desert throughout its whole extent. In the west and south the tracts of good land are larger and the sand-hills smaller.

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Physical Aspects.

The *Thal.*

The inundation canals find their way in, and with their help good crops of indigo and wheat are grown. The *thal* does not form a dorsal ridge between the rivers. There is a regular slope from the Indus to the Chenáb. The native legend about the formation of the *thal* is, that formerly the Indus flowed down the centre of it and deposited the sand; then the Indus changed its course to the west and the wind blew the sand into the heaps we now see. There is no doubt that the Indus did flow down the *thal* at one time. Mr. O'Brien saw a deed of sale in which Basíra; a village now in the centre of the *thal* and equi-distant from the Indus and the Chenáb, is described as Bet Basíra. At Sháhgarh, which is the southern end of the *thal*, a long lake which used to be the bed of the Indus is still extant.

Classification of the Thal.

The Thal consists of two large divisions known as the Jal Thal and the Roda Thal.

Jal Thal.

The Jal Thal is the Western and the Southern portion of the tract, taking up about half the area. It includes nearly the whole of the Thal Circle of Muzaffargarh, the greater part of the Nahri Thal, a small portion of the Chahi Thal and about one-half of the Pakka Circle of Sináwán. This last Assessment Circle is nearly all canal-irrigated and the western half of the Nahri Thal of Sináwán as well as a large portion of the Muzaffargarh Thal receives a considerable quantity of canal water. The waste area in the canal-irrigated portion has plenty of Sarkana (*Sachharum munja*). The eastern half of the Nahri Thal and the eastern portions of some of the villages in the Pakka Circle lie beyond the reach of the present inundation canals. Cultivation is found here only on wells which are scattared about, rather thinly. This tract abounds in the Jál (*Salvadora Oleoides*) which accounts for the name, and has also plenty of Kanda or Jand trees (*Prosopis Specigera*).

The Roday Thal.

The Roda Thal is so called because it is bare, *i.e.*, void of trees Large trees of Kanda (Jand) and Ukahn (*Tamarix Orientalis*) are found only on wells. The Roda Thal may be divided into three main portions :—the Lana Thal, the Bui Thal, and the Dhaya Thal,

The Dhaa Thal.

The Dhaya Thal is a strip of very high sand-hills running along the Chenáb Kacha from the extreme north-east of the District past the tomb of Bagga Sher in village Khanpur down to a point opposite the town of Muzaffargarh. Even these large sand-hills have *Laks* of culturable land between them, although the proportion is much smaller than that in the Jal Thal or in the rest of the Roda Thal. This tract is from half to three or four miles broad.

The Lana Thal.

The northern part of village Munda and the group of villages north of it are distinguished for growing a very large amount of the shrub called Lana (*Anabasis Multiflora*).

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Physical Aspects.
The Bui Thal.

The rest of the Roda Thal is known as the Bui Thal. There is some Lana to the south of Munda but its proportion grows less and less as we go south and the proportion of the shrub called Bui (*Panderica Pilosa*) and Phog (*Colligonum Convolvulaceum*) increases.

Kaura So, Mitha So.

The Roda Thal is again divided into Kaura So and Mitha So, with reference to the nature of the water in the wells. The water in the Kaura So is brackish while that in the Mitha So is not so bad. There is a certain quantity of salt in the water of the Thal wells everywhere, but in the Kaura So it is too large to allow any Kharif crops to grow and on some wells the water is totally unfit for human consumption.

The country outside the *thal*.

The rest of the district is a dead flat, and consists of strips of alluvial land running parallel to the bank of each river, which are irrigated by the annual inundation, and of a tract lying within the alluvial strips protected from the floods and irrigated by wells and canals. The alluvial lands are intersected by many side-channels of the rivers, here called *dhands* or *pháts*. The strips of alluvial land meet some distance above the junction of the rivers and in summer when the rivers are swollen, the whole of the tract south of Sitpur and Khanwah is submerged and communication is only possible by boats. Attached to every house in this flooded part of the district are one or more small platforms raised on poles called *mannhán* (Hindustání *machán*), on which people live when washed out of their houses. And a very hard life it is. From the end of June to the beginning of September the people are exposed to the hot sun by day, and to swarms of mosquitoes at night. Sometimes they are unable to leave the *mannhán* for days and weeks together. When the water subsides, comes the season called *sahrá*, during which hardly any one escapes attacks of malarious fever. A proverb says that to go and live by the river side is to place a baby in a witch's lap, and another :—

"*Vasandar bet na tan kapre na roti pet.*"

Residence in the *bet* is to have no clothes for the body and no bread for the belly.

There are, however, two sides to the question, for—

"*Daryá dá hamsáya na bhukhá na triháya.*"

The neighbour of the river is neither hungry nor thirsty.

Canal tract.

Bounded by the *Thal* on the north, and on its other three sides by the alluvial lands above described, is a tract naturally and artificially protected from inundation and occupying the centre of the district. This contains many populous villages and a few fair-sized towns. Superior crops of sugarcane, indigo, rice and wheat are grown in it. It is irrigated by inundation canals which run from April to September, and which are assisted by a large number of wells. Though this canal tract is in normal years protected by

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Canal tract

artificial embankments and natural elevations from the floods, yet the land lies very low, and destructive inundations from both rivers, do occur. Thus since 1873, this tract has been severely injured four times; in 1874 by a flood from the Indus, in 1878 by floods from both the Indus and the Chenáb, in 1893 by floods in the Chenáb and in 1903 again by floods in the same river. This canal country is throughout its length seamed with long depressions in the level of the ground running from north-west to south-east, which at various times were beds of the river Indus. Indeed, there appears little doubt that at one time or another, the whole of what is now the Muzaffargarh district was river bed; of these old river channels the most clearly marked are the Sháhgarh and the Sindrí, Saithal, Nángní, Garang, and Jannúnwáh *dhands*, and the old water-course which is now used as the bed of the Puránwah Canal. Well-defined old water-courses of this kind are called Garak, Garang, and Garangí. The *dhands* will be described further on. The district thus consists of three great natural divisions—the *thal*, the alluvial country, and the canal tract.

The rivers. The Indus.

The Indus flows along the western boundary of the district throughout its whole length, a distance of 118 miles. The slope of the bank in this district is shelving and easy, the set of the stream being towards the western bank, which in the Sanghar *tahsíl* of Dera Ghází Khán, is high and steep. In the cold weather it is two miles wide. In the hot weather it overflows its banks to such an extent that its width cannot be estimated. Its depth varies from 12 feet in the winter to about 24 feet in the summer. The current is strong and rapid. It has a great tendency to form islands and shoals, which makes its navigation dangerous to boats. The most remarkable feature of the Indus is the gradual shifting of its stream to the west. The native legend of its having once flowed down the centre of the *thal* has been mentioned. In the middle of the district are many villages now far away from the Indus, to whose names are added the words *bet, bela, kachcha*, denoting that at one time they stood on or near the river-bank. The inland portion of the district is full of water-courses which were once beds of the Indus. In receding westward it has left various side-channels which are easy and safe means of irrigation. The numerous inundation canals of the district have their heads in the side-channels, and are therefore comparatively safe from the erosion which is so destructive where canals take off direct from the main stream. We know from the *Ain-i-Akbari* that the Indus joined the Chenáb opposite Uch, about 60 miles above the present confluence at Bet Waghwar near Mithankot, and that nearly the whole of what is now the *tahsíl* of Alípur was then on the west bank of the Indus. General Cunningham's Ancient Geography, page 220, says that the junction "was still unchanged when Rennell wrote his geography of India in A. D. 1788, and still later in 1796 when visited by Wilford's surveyor, Mirzá Mughul

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Physical Aspects.
The Indus.

Beg." But early in the present century the Indus gradually changed its course, and, leaving the old channel at 20 miles above Uch, continued its course to the south-south-west. until it rejoined the old channel at Mithankot. Native tradition, however, says that the change of course took place suddenly, and about the year 1787 A.D., at the point where the Indus used to turn east to meet the Chenáb. One of the rulers of Sitpur dug a canal along the line of the present course of the river. The Indus suddenly deserted its old bed, and began to flow along the line of the new canal, and has flowed there ever since. This tradition is corroborated by the history of the time as to the date. The change of the course of the Indus left the country formerly on its west bank exposed to the attacks of the Baháwalpur State, then rising into power. Accordingly we find that in 1791 A.D. the Nawáb of Baháwalpur seized the whole country which was transferred by the change of course from the west to the east bank of the Indus, and from 1791 to 1819 the Nawábs of Baháwalpur governed this tract as independent sovereigns. The old bed of the Indus is still clearly marked and is known as the Jannún *nála*. It has a course of about 24 miles from the village of Mela Chachcha, which is in the north-west of the Alípur *tahsíl*, to the village of Makkhan Bela opposite Uch, where it joins the Chenáb. There is also good evidence of the junction having once been at Shahr Sultán, 13 miles north of the junction mentioned in the *Ain-i-Akbari*. The fickleness of the Indus has obtained for it the epithet of *kanjri*, or prostitute. The name of the Indus is "Sindh," which has three distinct meanings; (1) the river Indus, (2) the country on both banks of the river Indus and subject to its influence, and (3) the province of Sindh.

The Chenáb.

The Chenab is the eastern boundary of the district along its whole length, a distance of 127 miles. The river is known here as the Chenáb, but before it reaches this district it has recevied the waters of the Jhelam and Rávi, and is more correctly called the Trináb. After it has flowed three-fifths of the distance down the district, it receives the united Sutlej and Biás and becomes the Panjnand, Panch-nad though it is still known to us as the Chenáb. After its junction with the Indus at Bet Waghwar the combined rivers become the Satnand, Sapt-nad or seven rivers composed of the five rivers of the Panjab, plus the Indus and Kábul rivers. The bank of the Chenáb is in parts high and steep, in others the slope is shelving and easy. The depth of the stream varies from 15 feet in winter to 30 in summer. The Chenáb is narrower and less rapid than the Indus. The deep stream shifts very much, and the navigation is difficult but not so dangerous as that in the Indus. The Chenáb does not betray any marked tendency to encroach on one bank more than the other.

Difference in the slope of the Indus and Chenab.

Looking up the Satnand with one's back to the sea, the Indus and Chenáb part company at the southern end of this district above Mithankot. At this point the flood level is 308 feet above the sea. From here the slope of the Indus rises at the rate of 1.33,

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Physical Aspects.

Difference in the slope of the Indus and Chenáb.

per mile, and the Chenáb at 0·99 per mile. The Indus therefore gains 0·34 foot per mile, on the Chenáb, and at the north-west corner of the district, which is 118 miles above Mithankot, the Indus is 37 feet higher than the Chenáb opposite at the north-east corner of the district. There is no ridge between the two rivers (except the central part of the Thal in the nothern half of the district); the spill waters from the Indus are prevented from sweeping across the district by a complete system of artificial embankments. The rivers afford a safe retreat to criminals or persons who are in difficulties at home. Such people go for a trip down to Sindh, or up to Kalabagh and Lyallpur, and safely elude the police or their relations until the storm has passed.

Alluvial deposits. *Kálá páni.*

Both the Indus and Chenáb carry silt in suspension in their waters and, during the floods, deposit it on the adjacent lands. This alluvial deposit is known by several names,—*at*, *mat*, *ubá*, *navan* and *latár*. The effect of a plentiful deposit is said to last five years, and as the supply is regular, farmers dispense with manure in the alluvial lands. The silt of the Chenáb is said to be much more fertilising and to contain less sand than that of the Indus. A local proverb thus compares the rivers—

"*Daryá Sindh sona lave te kali deve,*
Daryá Chenáb kali lave te sona deve."=

The river Indus takes away gold and leaves tin,
The river Chenáb takes away tin and leaves gold.

Omitting destructive floods, there is only one condition under which inundation water does harm. When the flood has deposited its silt and flows on over salt land, the water becomes full of salt, and is highly injurious to vegetation. Flood-water in this state is called *kála páni*. Under all other circumstances it is most beneficial. Besides depositing rich silt it carries away the surface salts, sweetens wells, and brings with it the seeds of trees and of valuable grasses. The annual inundations caused by the rising of the river are called *chhal* and *bor*. These words are used for the normal as well as the destructive floods—

"*Je bor áwe tán bakht vadháwe,*
Je na áwe tán kura kháwe."=

If flood comes it increases our luck,
If it comes not, drought consumes us.

Rivers, the remarkable feature of the district.

The rivers and the facts incidental to them are the remarkable feature of this district, and touch the administration at more points than any other natural phenomenon. They irrigate by the regular inundation 176,000 acres, and by canals depending on them close on 300,000 acres of cultivation. Of the total cultivated area of the District aggregating 500,000 acres about 475,000 thus depend wholly or partly upon the rivers so that it is a matter of deep interest both to a population almost wholly agricultural, and to

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Rivers, the remarkable feature of the district.

Government which derives its revenue here literally from the water that the rivers should rise at the usual time, that the supply of water should be abundant but not excessive, and that the rivers should fall at the right time. When the supply is scanty; the keenest competition for the water begins. On the canals the best friends fall out. In the *sailába* country the water flowing in the drainage channels is dammed up and forced into the cultivated lands, and some very pretty fights are the result. If the water does not retire at the proper time, the land cannot be ploughed for the *rabi* crop. Even when the rivers are on their best behaviour, they deprive a fourth of the population during four months of the means of following their only pursuit, agriculture, and drive them from mere *ennui* to transfer cattle from bank to bank, and provide so easy a medium for transporting the stolen animals that a naked urchin can drive a herd of fifty buffaloes across the combined five rivers. But the rivers dc not always behave well: they burst *bands*, carry away houses and stacks of corn, breach roads, blow up bridges, fill canals with mud, throw down Government buildings and even drown the semi-acquatic cattle.

Dhands or backwater.

The side-channels of the rivers, the inlets from the rivers, and the tanks or lakes are called *dhands*. The side-channels are also termed *phåts*. The *dhands* are of two kinds. The first are isolated *dhands* in which communication with the rivers only occurs during the inundation season, and dries up before the next year's floods come. The second are connected *dhands*, being expansions of a river, small stream or canal into a small lake and which throughout or for the greater part of the year are connected with the rivers. The *dhands* supply a good deal of irrigation by means of Persian-wheels either single (*jhalár*) or double (*baighar*), one wheel being placed above the other. The *dhands* abound in fish, and great quantities are caught in them. The isolated *dhands* are the best for fishing, because weeds spring up rapidly in them and afford a refuge as well as food for the fish. The products of the *dhands* are described further on. The *dhands* swarm with wildfowl in the winter; a good many snipe are also seen, and occasionally a bittern. Very large bags of wildfowl have been made by sportsmen in the *dhands*. The *dhands* are very numerous and vary much in size and depth, according as the floods fill them or not. The following are the most permanent and the best for shooting:—

1. Ghazanfaragarh *dhand* in the village of Ghazanfaragarh, 15 miles south of Muzaffargarh. This is a permanent lake of about 50 acres. Wildfowl abound. There is a great fishery here. It is well worth a visit to see the take of fish divided in the evening. The lake is full of water-lilies.
2. The Sindhri *dhand* in the villages of Jálwála Muhammadpur, Chitwáhan, Isanwálí and Sandíla. It crosses the Alípur road between the 17th and 18th milestone

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Physical Aspects.

Dhands or backwater.

from Muzaffargarh. It is full of wildfowl, and bitterns are often seen. It abounds in *pabbins*.

3. Saithal *dhand* in the village of Basti Jalál. It crosses the Alípur road between the 20th and 21st milestone from Muzaffargarh; wildfowl are very plentiful.

4. Panjíhar *dhand* near Rohillánwálí, 23 miles south of Muzaffargarh; the country becomes so low, that the water of the Indus and the Chenab finds its way into the centre of the Doáb, and a perfect net-work of *dhands* occur, all of which discharge their waters into the Panjihar *dhand*, which crosses the Alípur road between the 24th and 25th milestone from Muzaffargarh. The Panjíhar is so called because it receives the surplus water of the following five canals:—

5. The Sardárwáh; the Nangwáh; the Adilwáh from the Indus; and the Hájiwáh and Ghazanfarwáh from the Chenáb. The Panjíhar, on its way to the Chenáb, throws out a branch called the Nángna or snake *dhand* from its tortuous course. Both the Nángna and Panjíhar abound in wildfowl and fish.

In May 1880 the Ghazanfargarh, Sindhri, Saithal and Panjíhar *dhands* were connected by short cuts and formed into the Rohillánwála drain or escape. After the great floods of 1882 a new branch called Talsind was made to catch the surplus water of the Indus canals.

6. Jannunwáh *dhand* is about 24 miles long. The northern end is in the village of Bhambú Sandila. It runs in a south-easterly direction and joins the Chenáb near Makkhanbela. It abounds in fish, wildfowl and snipe. Bitterns are often seen, *Kúndr* and *pabbin* are plentiful.

7. The Garang *dhand* is in the south of the Alípur *tahsil*; its northern end is in the village of Bhamri and its southern end in Kotli Lal. Its cold weather length is about 7 miles. Its greatest width is 60 yards, and greatest depth 12 feet. This is a real paradise for sportsmen. The water swarms with wildfowl and the banks with black partridge. Fish are abundant. Snub-nosed crocodiles are seen occasionally and tortoises reaching two feet in diameter and others are constantly met with.

8. Maggi and Maggassan, two creeks in Khar Gharbi and Isanwala. Duck are preserved here by the Mians of Thatti Gurmani and when not shot over by officers from Multán or elsewhere they afford excellent duck shooting.

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Dhands or backwater.

The *dhands* mentioned are fairly permanent, and are situated inland. There are many other permanent *dhands*. The right to fish and gather *pabbins* is leased by Government every year. Some *dhands* are leased singly, others in groups. Along the banks of the rivers the *dhands* are innumerable and vary much in size and position. New ones are constantly forming and old ones are filled up.

Geology.

The district contains nothing of geological interest as it lies entirely on the alluvium.

Botany. Trees.

The district is full of vegetation of great variety. The following is a complete list of the trees :—

Tahli.

Tahli (*shisham* in Hindustáni), *Dalbergia sissu*.—This tree nowhere grows with such luxuriance as it does in this district. There are two fine avenues ; one five miles long, leading from Muzaffargarh towards the old Shersháh ferry, the other from Muzaffargrah to Ghazanfargarh fifteen miles long ; which were planted by Captain Voyle, Deputy Commissioner, in 1854. Some of the trees have reached a girth of 9 feet. There are older trees of 14 feet in girth. The trees on the road from Ghazanfargarh to Alípur though of more recent origin have also grown into a magnificent avenue. Several other roads have now been planted with rows of this tree.

Kikkar.

Kikar, locally called *kikkar* (*Acacia Arabica*), is less common. It suffers much from frost, but where it escapes this danger, it grows into a very fine tree. The wood is much used for agricultural instruments. The young branches of the *kikkar*, *ber* and *jand* are cut as fodder for goats, and are called *lángi* and *lung*.

Sharính.

The *sharính* (Hindustáni *siris*), *Acacia speciosa*, grows badly in this district. It sometimes reaches a large size, but the wood is always much worm-eaten.

Jand or *kanda.*

The *jand* or *kanda* (*Prosopis spicigera*) is the commonest tree in the district. The *rakhs* are full of it. Where it escapes being lopped, it attains a fair size, but it is generally stunted and deformed from being cut for *lángi*. In the Thal where it is carefully preserved on the wells and regularly pruned, it grows straight up to a height of about 30 feet and its girth is sometimes as much as 9 or 10 feet. The pods are called *shangar* or *sangar* or *sangri*, and are used for food, being eaten either boiled with *ghi* as a relish, or mixed with curds and called *araita*. They are also dried as a preserve. Hindú bridegrooms generally and a few Muhammadans cut a small branch of a *jand* tree before the marriage procession reaches the bride's house. Offerings are made to the *jand* tree by the relations of Hindú small-pox patients during an attack of small-pox. The wood is used for agricultural implements and fuel.

The *ber*.

The *ber* (*Zizyphus jujuba*) is common, and attains a large size. Near Rohillánwálí are some very fine trees. The dried fruit is called *bhugrián*.

The *ukánh*.

The *ukánh* (*Tamarix orientalis*) is called *túlhá* while young. It thrives every-

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where, and is propagated with ease. A branch stuck in the ground will strike if it gets a little water at first. The manna of this and of the *laí* is called *shaklo*. The galls, *máin*, are used for dyeing and tanning. The *laí* (*Tamarix dioica*), called *pílchhi* in the Punjab and *jháu* in Hindustan, grows spontaneously wherever river-water reaches. The river banks particularly those of the Indus are lined with thickets of it. *Laí* is used instead of masonry for lining wells and for making baskets. It is usually a mere bush, but in the *thal*, west and north of Mahmúd Kot, it grows to so large a size as to be worth selling as fuel. The *jál* (*Salvadora oleoides*) grows spontaneously in the *thal* and in waste land. The wood is of little value, as the proverb says,—

The *laí*.

The *jál*.

" *Na kam da na kár dá.*
Ajáyá chuggha jál dá.

Of no good and of no use.
Like a worthless stick of *jál*.

The fruit is called *pílh* plural *pilhún*, and is largely eaten by the natives. The dried fruit is called *kokir*. The leaves and twigs furnish fodder for goats and camels. The *jhit*, a variety of *jál* (*Salvadora Indica*) is common in the south of the district, especially in the inundated parts. It is of no use except to make tooth-sticks, *miswák*, locally called *muság*, for which use its bitter wood makes it a favourite. The *karính* or *karíta* (*Capparis aphylla*) is common in waste land. It makes rafters and fuel of an inferior sort. The flower is boiled and eaten as a vegetable. The name of the fruit is *delha*. It is made into pickle. The *ubhán* or *bahán* (*Populus Euphratica*) grows spontaneously on the banks of the Indus, lower Chenáb and Sutlej after its junction with the Chenáb. Where it escapes lopping, it attains a large size. Its young branches provide fodder for goats. The wood is light, and consequently is used for making beds, door-frames, *bair*, wheels for wells, and rafters. *Phog* (*Calligonum polygnoides*).—Its habitat is in the *thal*, where it is very abundant. It is a small leafless shrub. The wood makes excellent charcoal. The twigs provide fodder for goats and camels. The fruit ripens in May. It is called *phogli*, and is both cooked as a vegetable and made into bread. *Ak* (*Calotropis procera*).—Perhaps this should not be classed as a tree, but specimens occur 10 feet high with wooded stems nearly a foot in girth. It is usually a shrub. Goats and sheep eat the leaves.

The *jhit*.

The *karính*.

The *ubhán*.

The *phog*.

Ak.

The trees before mentioned are those commonly seen. The following are more rare here; but as they are common Indian trees, they require no description :—(1) *Pippal, Ficus religiosa*. (2) *Bohir, Ficus Indica*. (3) *Amaltas*, here called *girdnalli, Cathartocarpus fistula*. (4) *Lasura, Cordia myxa*. (5) *Rohira, Tecoma undulata*. (6) *Gondi, Cordia rothii*. (7) *Jaman* here called *jammún, Sizygium jambolanum*. (8) *Chhichhra, Butea frondosa*. (9) *Phulái, Acacia*

Other trees.

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modesta. (10) *Kabali kikkar, Acacia supressiformis.* (11) *Sohánjna, Moringa pterygosperma. Pippals* and *bohirs* should be more abundant than they are, for they were carefully preserved by Diwán Sáwan Mal. No one could get leave to cut a *tahli* tree, even in his own land, without a personal application to the Diwán, and without paying the full price. Even a *kikkar* or *ber* could not be cut without obtaining the permission of the *kárdar* and paying the full price of it; but to cut a *píppal* or *bohir* was absolutely forbidden, and entailed severe punishment. The garden trees are mangoes, pomegranates, apples (here called *suf*), oranges, limes and figs. The mangoes are superior, and are largely produced. Mango gardens are common all over the district, but those round about the towns of Muzaffargarh, Khangarh and Sitpur are very productive. One tree in Bhutapar near Muzaffargarh is very famous, and its produce is sold for something like Rs. 500 a year. Mangoes sell at from 8 to 16 sers per rupee during the fruiting season and dearer at the beginning and end of it.

Garden trees.

Date palms.

The most remarkable plant in the district is the date palm, *khajji.* The fruit forms a staple food during part of the year. Every part of the plant has a separate name and a separate use. The trees pay a tax to Government, which furnishes a considerable revenue. The *khajji* grows in every part of the district and flourishes in the poorest soil. Dates are divided into *nar* (male), *mada* (female), *khassi* (neuter), and *bogh*, which means in Arabic a casing, and applied to dates, means stoneless. In February, one or more spathes issue from the root of the terminal cluster of leaves. The spathe is called *sippi* (a shell). As the spathe opens, clusters of tendrils (*mál*) emerge, covered with little white waxy balls which are the flower-buds. The clusters are called *gosha,* and the buds *búr*. In April the fruit is the size of a pea, and is called *makora* or *pippún.* At this stage birds begin to eat the dates, and do great damage. In July the fruit has attained its full size, and is called *gandora* or *doka,* and those dates are gathered which are to be ripened by being salted called *lúni pind,* "salted dates." In July and August the fruit is completely ripe, and is called *pind.* A few ripen later in the month of Badra (August-September), and are hence called *bádri.* A proverb gives a *memoria technica* for the various stages :—

Visakh makora, Jeth gandora.
Harh doka, Sáwan pind.
Badra aya te kadh giya.
Khajjiwalian de jind.

"In April-May *makora*, in May-June *gandora.*
"In June-July *doka,* and in July-August *pind* ;
"August and September came, and took away
"The date-eater's life."

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Physical Aspects.
Date palms.

Dates are consumed in three forms :--

1.—*Luni pind*, "salted dates."—These are picked when unripe, and ripened by being rubbed with salt, and being kept for a day in a tightly-closed jar.

2.—*Van-di-pind*, *i.e.*, dates of the tree.—Dates which ripen naturally on the tree.

3.—*Chirvin pind*, *i.e.*, split dates.—Inferior dates are split open, the stone is taken out, and the dates are dried.

Dates are either cultivated, in which cases they are called *Háth rádh*, or grow spontaneously, when they are called *apere jamian* or *giddarián*, from a story that they have sprung from stones which jackals have thrown away after eating the fruit. At the end of April, watchers called *rákhas* are hired to watch the fruit. A *rákha* usually receives from Rs. 5 per month, a quarter or half a ser of ripe dates in the season, and as many fallen dates as he can eat. A *rákha* can watch 200 trees if they are sparse, and up to 400 if they grow thickly. Dates are also preserved by the clusters being enclosed in net-work bags made of grass, which are called *tora*, or bags of matting made of the pinnæ of the date tree, called *bindi*. When the dates ripen, pickers (*chárhá*) are hired. A picker gets from Rs. 6 to 8 per month, a ser of ripe dates a day, and as many dates as he can eat while up on the tree. Around Muzaffargarh he gets two *chhittáks* of onions per day and five yards of cloth. The picker keeps himself in position at the top of the tree by a thick rope which passes round the tree and under his seat. The rope is called *kamand* Picking looks more dangerous than it really is ; still there are accidents every year. Pickers are allowed by the owners to give a handful of dates to each passer-by. A handful is called *pánja*. Hence the dates season is a favourite time for pilgrimages, because the pilgrims need not take food with them, and can subsist on the *pánjas*. The picked dates are taken to an enclosure called *Khori*, and are exposed to the sun for four days, after which they are ready for storing or export. Dried dates will keep good till November, after which they breed worms. Another mode of drying dates is to boil them in water, then throw away the water, add a little oil, and fry the dates till quite dry. In this state dates will keep a year. Such dates are called *bhugrián*.

Parts of date tree and the use of each.

Every part of a date tree has a separate name and a separate use, The stem is called *mundh* while standing, and *chhanda* when cut down and trimmed of its branches. It is used for rafters, and, when hollowed out, for aqueducts. A cluster of stems springing from one stool is called *thadda*, and a grove of dates is *jhat*. The leaf stalk is called *chhari*, and is used for making fences, frames and such light wood-work as in other parts would be made of bamboo. It is also beaten into fibre and used for making ropes. The *chharis* are cut every year, and the stumps are called

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Parts of a date tree and the use of each.

chhanda, and near Rangpur *daphi*. The pinnæ are called in the south of the district *bhútra*, and in the north *phara*. They are used for making mats, baskets, fans and ropes. The *rete* or net-work fibre that is formed at the base of each petiole is called *kubál*, and is used for making ropes. The fruit stalk, with the fruit on, is called *gosha* and *buhára* after the fruit is picked, when it makes an efficient besom. The cluster of leaves at the top of the palm is called *gácha*, and in the heart of it is the terminal cabbage-like head called *garí*, which is edible. The date-stone is called *gakkar*, *gitak* and *giká*. The thorns are *thuha*.

Diseases of date palms and their fruit

When a date palm begins to fall off in bearing, it is severely scorched, which is said to restore productiveness. Palms growing in sandy soil often dry up without any apparent cause. This disease is called *barra*, a local name for fever. Worms of various sorts attack the fruit while still on the tree. The best known of this is called *susari*. It is exactly like a weevil. The greatest enemy of the date is continued rain, which, when it occurs, completely destroys the crop. The people eat dates for four months in the year. They eat them at their meals, and at all times of the day and night besides. Poor people subsist on dates altogether during the season. In the south of the district, dates are pounded, mixed with flour, and made into bread. Dates are sometimes mixed with tobacco and smoked. People eat dates till they are surfeited, and then chew a raw onion and begin eating again. When it is remembered that there are 838,999 female date palms in the district, and that the average crop is 20 sers or more, it will be seen what a large staple of food dates form. The *jama* assessed at the Revised Settlement on the date trees is Rs. 38,999. An account of the revenue, past and present, derived from date trees will be given hereafter.

Date as food.

Water-plants of the *dhands*.

Besides fish, an account of which will be given hereafter, the products of the *dhands* are as follows:—Water lilies (*Nelumbium speciosum*). The local name is *pabbin*. The flowers are used for medicine and considered cooling. The seed capsules hold 20 or 22 seeds embedded in cellular pith, of the size and taste of a filbert. While young, the seeds are eaten raw or cooked as a vegetable. The flesh of the seed is called *gar*; it is white, covered with a green seed-coat. The seeds are considered a cure for vomiting, and, mixed with sugar, are good for diseases of children. The roots of the *pabbin* spread in the mud at the bottom of the *dhand*. They are long and white and divided into lengths by knots. They are dug up and eaten, either roasted with salt or boiled as a vegetable. *Pabbin* roots are called *bhe*, a corruption of the Persian *bekh* or root. *Singháras* (*Trapa bicornis*) are sometimes found in the *dhands*. The nuts are dried and, when required for use, the kernels are separated from the husks by pounding, and made into flour. *Kundr*, bulrush (*Typha augustifolia*) is found in most of the *dhands*, especially in the south of the district. The flags are called *phara*, and are used for making matting called *parchha* and *phúri*, and string for beds.

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Water-plants of the *dhands*

A charpoy of bulrush string is highly esteemed for its softness and coolness, and to sleep naked on such a bed is considered a great luxury. The down of the ripe ear is collected and boiled in a cloth like a plum-pudding. It has a sweetish insipid taste. The down is called *búr*, and down pudding is *búri*. At the lower part of the ear a fibrous substance, something like cotton is produced, which is called *kahu*. This is used as tinder, and is much sought after by the frontier Biloches.

Fodder plants.

The following are the most common and esteemed fodder plants. *Talla* grows everywhere except in *kallar* and sandy soil. *Talla* is the *dub* of Hindustán. It is an excellent grass for fodder, and is a sign of good soil. *Chhembhar* in sandy soils takes the place of *talla* as a fodder grass. It is a prostrate grass that sends out runners. It is surprising to see how fast it grows in the *thal* after rain. It is excellent fodder. *Drabh* is a strong course grass with long roots. It grows in all kinds of soils, even in the poorest, and remains green all the year round. It is difficult to eradicate. The agriculturists liken themselves to it in the proverb:—

"*Zamíndár drabh dí pár hín.*"
Zamindars are like the drabh root,

i.e. Rulers change, but the *zamíndár* lasts for ever.

Madhánd is a rain grass of excellent quality while it lasts. It is so called because its flower resembles a *madháni* or churn-dasher. *Trir* or *makhnala* is another rain grass, and is much liked by horses. *Kal* or *kabba* is also a rain grass, and is excellent fodder while green, but it soon grows hard and uneatable. *Lehu* is a thistle, and grows abundantly among the *rabi* crops. It is grazed, and also cut and given to cows and bullocks to eat. *Visáh* is a spreading fleshy-leaved plant which grows in the rains. It is eaten by all animals except horses and asses. This is the plant elsewhere called *itsit*. *Sinjhi* is a plant like clover, which bears a yellow flower. It grows wild among the *rabi* crops, and in parts is cultivated. There is a species with white flowers which is said to give colic to cattle. *Jaudal* is a plant that grows among wheat and barley, and until seed time it cannot be distinguished from them. The seed, however, is small and tasteless; while green, it is good fodder. *Dodhak* is a small milky plant which provides fodder for sheep and goats only. The *bútá* is the *Saccharum sara*, often wrongly called *sarkána* and *munjkana*, which are really names of parts of the plant. This is almost as useful as the date-palm. The wavy leaves at the base of the plant are called *sar*, and, besides being good fodder, are used for mats and thatch. The tall stem is called *kánán*, and the upper part of the stem *tilí*. *Kánán* is used for making baskets, chairs, walls of huts, screens, roofs, rafters, and fences. The *tili* is used for making baskets and besoms. The sheath of the *tilí* is *munj*, and is used for making ropes. The flowers are called *bullú*, and are given to cows and buffaloes to increase and enrich their milk, and are hence called

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Fodder plants.

makkhan sawái or "butter one and a quarter more." *Kánh* is the *Saccharum spontaneum*; it is very abundant in the low ground near the rivers which is annully inundated, and in the islands. It furnishes first-rate fodder for buffaloes—and pens are made from the stem. *Khawi* is a grass which has a faint lemon smell; it is found in the *thal*. *Dila* is a rush which grows in marshy grounds. It is inferior fodder. *Murak* is another marsh plant; it is soft and tender, and much esteemed as fodder. *Juság* is a plant which is used as fodder and also as a pot-herb; it is said to soften other vegetables and meat which are cooked with it. *Lána* is used in this district only as fodder for camels. *Sajji* is not made. Camel-thorn, here called *jawánh* (Hindustání *jawása*), is common. The following plants, which are mere weeds, are also used as fodders:—*kharpal, manjhár, sávri, mainán, bhukan,* or *bukan, batthun* or *báthún, pit pápra, sin, palwáhán,* and *patráli.*

Plants other than fodder plants.

The following are the most common plants, other than fodder plants. The line between fodder and other plants is not very clear, for camels and goats will eat anything. *Khip* (*orthanthera biminiea*) is a leafless shrub, which grows chiefly in the *thal*. It is not put to any use, except covering rafters on roofs. It is very inflammable; if two pieces be rubbed together, these will catch fire. *Bhakhra*, Hindustání *gokhrú* (*Tribules terrestris*) grows generally in sandy soils; it has a caltropshaped seed-vessel. It is used to cure gonorrhœa. *Puth kanda*, literally "inverted thorn" (*Achyranthes aspera*), is common in Sanánwán. The leaves are dried, made into powder, and used as an emetic. *Dhamanh* (*Fagonia cretica*) is found in the *thal* during summer. Camels eat it, and medicine is prepared from it to check impurity of the blood (*malái*). *Karvílun* (*Capparis horrida*); the fruit ripens in March and April and is made into pickles; leaves are made into fomentations for sore-throats. *Ratkán* grows in summer on the banks of the canals; it is used in diseases of horses. *Kaurtummán*, the colocynth gourd, grows in the *thal* and in sandy ground, during June and July. It is a fovourite medicine for horses. *Kanderí*, a plant with thorns on the stem, leaf stalks, and leaves with a fruit like potato apples. *Phesak láni* (*Suoeda fruticosa*) is eaten by camels, and medicine is made of it to relieve the load on the chest of pregnant women. *Hurmal* (*Peganum harmala*) grows everywhere. The seeds ripen in August; mixed with bran and salt, and burnt, they are efficacious in driving away *jins* and averting the evil eye and the machinations of enemies. *Lút* is a parasitical creeper of a light-green colour, that grows on the upper branches of trees. It kills the tree to which it attaches itself. *Bhuen phor*, literally the earth-splitter, (*Philipœr calatropidis*); this curious plant is very common. In February and March its stem, about an inch and-a-half thick, bursts through the ground, sending fissures all round, and grows from 6 inches to a foot high, and is covered with handsome wax-like flowers. The whole plant is very juicy. It is given to goats to

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Plants other than fodder plants.

increase their milk, and, when bruised, is applied to boils. It is also given to children to cure impurity of blood. *Sitún* (*Bouceroxia edulis*)[1] is a kind of wild asparagus, after summer rains springs up at the roots of the *jal, jand, karíta*, and *phog* trees. It is eaten with salt and also cooked as a vegetable. It has a pleasant acid taste. *Chibhar* is a small gourd that grows wild among the *kharif* crops. The fruit is eaten raw and cooked with meat, on which it is supposed to have a softening effect. *Chibharen di bar*, the "threshing floor of *chibbhar*," is used commonly for the "Greek kalends."

> "*Chibharen di bár te desi.*"
>
> "He will pay it at the *Chibbhar* threshing floor," *i.e.*, he will never pay it.

Jati muság, literally the "Jat's tooth brush," is a small plant with pink flowers, that grows on land subject to inundation. *Bhangra* is of two kinds, one kind has blue flowers, of which women make collyrium. The other kind grow on the banks of water-courses, and when reduced to ashes, is used for curing galls on bullocks caused by the yoke. *Uthpera*, literally "camels' foot-prints," is a plant with broad leaves that grows in the *thal*. The leaves are dried, pounded and boiled, and used internally for gonorrhœa. *Fatokar* grows in the hot weather. Its leaves are used by bald men as a hair-restorer, and are also good for boils. *Bhukal*, literally "buds of the earth," is a plant very like an onion which comes up with the *rabi* crops. It bears a small black seed which ripens just before the wheat harvest. In times of scarcity, the seeds are ground and made into black bread of repulsive appearance, which is very indigestible, but is eaten nevertheless. *Khumbhi*, mushrooms, are common in the *thal* after rain in the hot weather. They are of very good flavour. Although usually eaten fresh, they are also dried for future consumption, and preserve their flavour in the dry state wonderfully well. *Pad bahera* is the name for fungi of all sorts. Other plants less known are—

> *Gorakhpán, dandelí, tandúla*; *maríri, reshan, van veri, sijh ubhára* or sunrise, *saláia, kauri valh* or bitter creeper, *piplí, Kalaich búti, nilbúti* or wild indigo, *gidár war* or wild cotton, *angáir, kanjun* and *bo phalli.*

Wild animals.

Tigers were seen in the dense jungles on the banks of the Indus, towards the south of the district as late as 1879, but have since disappeared. Wolves, here called *náhar*, are found throughout the district, and wild pigs are extremely common, especially on the banks of the rivers. Wild boars are called *mirhon* and wild sows *bhúndin*. The only deer in the district are *parha* or hog-deer and the Indian gazelle, here called *haran* and in Hindustan *chikára*. Jackals and foxes are common. Hares are rare. Otters are found

(1) Fully described in Edgeworth's *Florula Mallica*.

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in the south of the district. Hedge-hogs, here called *jáh*, are common. Mungoose, called here *naulún*, are very common. Pig and hog-deer are occasionally taken by nets of *munj* rope supported on movable poles with side strings fastened to bushes. The net is called *wanvar*.

Birds.

The following birds are found in the district:—

Doves	The male is *gera*, the female *tuttin*.
Sparrows	*Chiri*.
Hoopoe	*Hudhud*.
Wood-peckers	*Drakhan pakkhi* literally the "carpenter bird." The hoopoe is often called by this name.
Peewit	*Tatiri*.
Warty-headed Ibis ...	*Kánwní*.
Tern	*Karáhí*.
Sandpiper	*Tatuha*.
Pelican	*Pain*. There is a larger kind called *sohal pain*.
Indian snake-bird ...	*Siri*.
Crows	*Kán*.
Lark	*Chandúr*.
Kite	*Hill*, Hindustani *chil*. In popular belief, the kite is female for six months of the year, and male for the other six months.
Vulture	*Gijh*.
Pharaoh's chicken ...	*Súndá*.
Blue jay	*Chán*. Its flesh is good for colds. To hear or see a blue jay is a bad omen. Held sacred by Hindus.
Magpie	*Matah*.
Straited Bush Babbler ...	*Herhá*.
Bengal Babbler ...	*Dad herha*.
Parrot	*Tota*.
Butcher-bird or shrike ...	*Malálá*. Both the grey-backed and red-backed species are found. To see a butcher-bird fly is a good omen.
Kingcrow	*Kal karachchhí*. This bird is venerated by Muhammadans, because it brought water to Imám Hussain when he was martyred, and also on account of its habits of early rising.
Swallow	*Abábíl*.
Kingfisher	*Toba*, literally "diver."
Egerets and paddy-birds	*Baglá* and *bag*. The young are eaten and considered fattening.
Coot	*Ari*.
The Blue Coot	*Kulang*. Water rail is *khanautí*.
Indian Oriole	*Hariáwal*.
Avadavats	*Lálí*, and *sharak lálí*. The last name literally means *lálí* weighing a *chhitták*.
Spoonbill	*Doí bag*. Literally spoon heron.
Heron	*Sánh*.
Raven	*Dodar kán* and *ruhelá kán*.
Owls, owlets, and goat-suckers.	*Ghugh*, *ullún*, *chibrí*, and *huk*. Owls and goat-suckers are birds of bad omen.

The other Raptores are—

Kurl	A large hawk found near water. It lives on fish and wild fowl.
Báz, female	*Jurra*, male.
Bashin, male	*Básha*, female.
Chipak, male	*Shikra*, female.

Laghar.	*Shíhin.*
Tumtrí.	*Charag* (male chargela).
Chúhemár.	*Bahri.*

which are all hawks of different kinds. Cormorant, *khambu.* Bittern is here called *nardúr*. The Grebe is *tuháyá*.

The brids for which the English equivalent is doubtful are—

Karwának, also called *saukin* (known as a stoneplover but really a lapwing).	Lives on the banks of rivers and in sandy deserts.
Nil bulai	Lives on the banks of rivers and near water. A kind of water-rail apparently.
Dhing	Very large crane-like birds which congregate in flocks during the cold season.
Badhing...	(as above)
Bulbuls	These are common to all India, and are great pests to the gardener. Nightingale.
Phiddí	
Dhúri	A small ash-coloured bird with a long tail.
Chhapaki	An ash-coloured bird, the size of a dove. If a person who kills a *chhapaki* touches another who is afflicted with itch, the latter will be cured.
Tilyar or *vahye*... ...	The *tilyar* is, probably, a starling, and the *vahye* though differing in colour, is like a starling in its flight. Both are great enemies to the farmer, and are very destructive to dates.
Trakla	This is apparently the green pin-tailed fly-catcher. It is named *trakla* from a fancied resemblance to the spindle, *trakla*, of a spinning wheel.

The game birds and those usually shot by Europeans are—

1. The florikin (*Houbara macqueeni*) here called *tilor*. 2. Sand grouse (*bhatittar* or *khátakkar*). 3. Partridge, *tittar*, black (*mushki*) and grey (*gorá*). The female black partridge is called *missi*. 4. Quails arrive in great numbers in March and September, but soon disappear. A few remain all the year. 5. The common, the jack and the painted snipes, *chahá*. 6. The wild goose, *mangh*. 7. Mallard, *nirgi*. 8. The spotted-billed duck *hanjhal*. 9. Gadwal duck, *buar*. 10. Shoveller duck, *gena*. 11 The marble-backed duck, *bhurru*. 12. The Brahminy duck, *chakwa*. 13. The common teal, *karara*. 14. The shell drake or burrow duck, *dachi*. 15. The white-eyed duck, *ruhári*. 16. The whistling teal. *Kunj* and pover are common in the lowland near the rivers. The plover is called *Pulimi*, "the weaveress," from its gait. It makes a short rapid run, and then stops like a

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weaveress when preparing her thread. Pigeons are found all over the district. Quail and water-fowl are netted in great numbers by native hunters.

Fishing.

Fishing provides an industry for a very large number of people.

The fishing tribes—Jhabels, Kihals and Mors—live almost entirely by it, and other people take to fishing for support as well as amusement. The instruments used are—

(1). The drag net called *chheku jál* or *ghána*. This is made of several nets fastened together.

(2). *Nará.*—This is a stationary net, which is kept in a perpendicular position by means of floats made of reeds.

(3). The cast net, *sátu jál.*

(4). The *kur* is a beehive-shaped frame of wood, lined with a net. It is jammed to the bottom of shallow water, and secures whatever fish are inside.

(5). *Kara* is an eight-sided cage surrounded with netting.

(6). *Sangola*, a spear like that carried by *chaukidárs.* This is used also for spearing tortoises.

(7). *Tarki*, an instrument for fishing.

Fish are also caught with the hook and line in deep water, and in the rivers. The rivers abound in fish, but few are caught in the main stream, except the *khaggá*, a siluroid fish, which takes a bait readily. The fisherman's apparatus is too weak and too small to be of much use in the large and rapid channels of the rivers. The great field for fishermen is in the side-channels, backwaters and tanks, here called *dhands.* These *dhands*, and the manner in which they are leased by Government, have already been described at pages 8 to 10. The fish-eating crocodiles (*Gavialis Gangeticus*) here called *sinsár*, are common in both rivers. The snubnosed crocodile (*Crocodilus palustris*) is common, but it shows itself less, and prefers the still water of the *dhands.* Tortoises are found both in the rivers and in the *dhands.* The porpoise (*Platanista Gangetica*), here called *bulhin*, is often seen in the main stream of the rivers. Otters are common, and are said to be taught by fishermen to bring them fish. Otters are supposed to be the incarnation of greediness, and a proverb says—" Only a fool would go to the otter's home to get the remains of yesterday's dinner. "

The fish are of very excellent quality. The species are not very numerous. The following is believed to be a complete list:—

Kanghi (*Ambassis baculis*).—This is the only member of the perch family found in the district.

Of the snake-headed fishes two specimens are found.

Chitra (*Ophiocephalus marulius*).—This is the *sahol* or *saul* of the Punjab.

Guddú (*Ophiocephalus punctatus*), Hindustáni and Panjab, *garái*.

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Fish.

The *chitra* attains to three feet in length, the *guddú* about eight inches. They have few bones, but are insipid eating.

The spiny eel has two representatives—*Goj* (*Mastacemblus armatus*) ; *Gujíra* (*Mastacemblus pancalus*). Both are good eating and excellent when stewed.

The siluridæ have the ten representatives given below, and probably more. They are scaleless and good eating, but are, as a rule, filthy feeders. They will take a baited hook or a spoon bait readily. (1). *Singhara* (*Macrones aor*). (2). *Malhir* (*Macrones tengara*). (3). *Khagar* (*Macrones cavasius*). (4). *Khagga* also called *trikanda* (*Macrones careio*). (5). *Ahi* (*Pseudotropius atherinœdes*). (6). *Dhungná* (*Pseudotropius garua*). (7). *Dimmun* (*Callichrous checkra*). (8). *Ghoghun* (*Callichrous bimaculatus*). (9). *Mallí* (*Wollago attu*), the *boálí* of Panjáb and Hindustán. (10). *Luankh* (*Saccobranchus fossilis*), Hindustáni *singí* :—a very ugly fish with eight long thick barbels ; each pectoral has a poisonous spine, which is said to cause a wound as painful as a scorpion's sting.

The carp family has the ten representatives given below, and probably more. They are all excellent eating and clean feeders; (1). *Dambhrá* (*Labeo rohita*), the *rahú* of Punjab and Hindustán. This is the best of all the fishes for eating. The *Thailá* and *Morí* rank next. (2). *Dáhi* (*Labeo calbasu*). (3). *Sarihán* (*Labeo cursa*). (4). *Thailá* (*Catla buchanani*). (5). *Mori* or *Moráki* (*Cirrhina mrigala*). (6). *Sohnín* (*Cirrhina reba*). (7). *Popri* or *Kharnín* (*Barbus sarana*). (8). *Drura* (*Barbus chrysopterus*). (9). *Dará* (*Rohtee cotio*). (10). *Parahi* (*Chela gora*).

The herring family has only one representative, the *chhuchí* (*clupehchapra*). The notopteridæ have only two species: (1). *Pari* or *batti* (*Notopterus chitala*). It has a number eyelike marks near its tail. (2). *Káni pari* or *kání batti* (*Notopterus kapirat*), literally the one-eyed *pari* or *battí*, so called because the eye-like spots near the tail are wanting. Both the notopteri are full of bone and tasteless.

Besides the fish before mentioned, there is the *shahingar*, a small scaleless fish with five dorsal rays headed by a spine, ten ventral rays pectoral fins headed by a spine, four barbels, adipose fin, back yellow with black stripes, whence comes its name *shahingar* or tiger-fish, from *shinh*, a tiger. This probably is one of the *Glyptosternum* genus. The following fish complete the list:—(1). *Chhálli*. (2). *Lákhi gogún*. (3). *Tukar machi*. (4). *Gula*. (5). *Patol*. (6). *Khitha*. (7). *Makhni*. The *gangat* is a large prawn, and *jhingá* is a shrimp. It may be mentioned that the residents of this district generally cannot be trusted to give the names of the birds or fish correctly. To get correct information the fishing and

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sporting tribes—Jhabel, Kihal, Mor, and Mahtam—must be consulted. Government derives revenue from the fisheries, an account of which will be given further on.

Reptiles.

The reptiles of the district are as follows:—River-tortoises, which are eaten by the Kihals, Mors, and Chúhrás, but not by other tribes. Among the *sauria* are—

1. The snub-nosed crocodile (*Crocodilus palustris*) here called *baghún*.
2. The fish-eating crocodile (*Gavialis Gangeticus*), here called *sinsár*. The tribes before mentioned eat the flesh of these.
3. The *goh*.
4. The *guhira*. This is said to be the young of the *goh*, but it seems to be a distinct species.
5. The *sáhnán*, a lizard which frequents sandy grounds. The flesh is used in medicine, and is credited with strengthening and restorative powers.
6. *Kirari*. The common house lizard.
7. *Korh kirarí*. Literally the leprous lizard. It is said to change its colour, and is apparently a kind of chameleon.
8. *Khan* is black and white lizard with a bluish tinge. There are all sorts of fables about *khans*. It does not copulate, but is found full grown in the belly of snakes. It is supposed to be most deadly.

   Jai kún kháwe khan.
   Má na dekhe jan.

   "He whom a *khan* bites is as sure to die as if his mother had never seen him born."

   It is really perfectly harmless.
9. *Galei* is larger than the house lizard, and is supposed to be harmless. If a woman touch a *galei* before she makes butter, it will be abundant.

Frogs, the male called *dedar* and the female *did*, abound everywhere.

Snakes.

Snakes are very common. The following are the chief kinds:—

There are several varieties of cobras. The names depend on the colours. The native names of 12 varieties are given below. It should be remembered that *bishyar*, *mushki* and *kálá* all mean black; *chúhrá* also means black, because sweepers (*chúhrá*) are black-complexioned. 1. *Bishyar*. 2. *Mushki*. 3. *Kálá*. 4. *Mushki kála*. 5. *Chúhrá*. 6. *Chúhrá Mushki*. 7. *Mushki titará* or partridge black. 8. *Mushki. tilyar*, starling black. 9. *Moti bind*, literally pearl drops.

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Snakes.

10. *Mushkí phanyar*, the black-hooded, from Sanskrit *phan*, a snake's hood. 11. *Petí bagga*, white bellied. 12. *Gal kálá*, black-throated. The natives say that these are all separate species. The *lishyar* has no hood, and is therefore one of the Elapidæ. All the other varieties appear to have hoods. The *bishyar* is believed to be the female of the *mushki tilyar*. Other poisonous kinds are the *sangchúr*, literally "throttler," also called *gurâha*. This is the *Ophiophagus elaps*. The *korkind* or *kurandí*, also called *jalebi*; these three names denote the double coil in which it lies. It is also called *khaprá* and *khar peti* from the hardness of its skin. This is the *Echis carinata*. The *charhoá*, literally, "washerman" is a harmless snake. Other snakes are *padam*, *vais*, *do-múhan*, or the snake with a head at each end. *Tír már* or *ghore dangan*, *udná* or *jatála* ; this is said to be a hairy snake. *Salang vasak*, also called *sah pívna*, the breath-drinker, because it drinks the breath of sleeping persons. Wonderful stories are told of some. The *vais*, for instance, ties the hind legs of buffaloes together with its coils as with a kicking strap, and drinks their milk.

Insects.

The insects which force themselves on one's notice are—1. *Makrí* or locust. 2. *Tiddi*, a grass-hopper most destructive to young crops. 3. *Dánwar*, spider. 4. *Vathûnhán*, scorpion. 5. *Dembhún*, wasp, hornet. 6. *Labána*, an earth cricket with formidable jaws that bites severely. It is called *labána*, the name of a tribe of industrious Sikh colonists, obviously owing to its hardihood. 7. *Kankoil*, centipede. 8. *Popat*, butterfly. 9. Bees, here called *makkhi*, produce good honey (*mákhi*) in April and October.

Climate.

The Thal, or the sandy desert, is extremely dry all the year round, and the health of that tract is particularly good. The other parts of the district, whether flooded from the rivers or irrigated by inundation canals, are not half so dry. There is plenty of moisture on the ground and in the air. By the end of the inundation season, *i.e.*, by September, the moisture reaches the maximum and generally gives rise to malaria, the tracts best inundated suffering most. The heat from May to September is intense, but a cool breeze springs up regularly at about 11 P. M. from the middle of August onwards and makes the nights quite endurable. In the whole summer there are just a doze nnights when there is not a breath of air. These nights are a real trial, and produce a feeling very nearly amounting to suffocation. The months of November to February are quite cold, and severe frosts occur in some years causing severe injury to cotton, mangoes and sugarcane. The hot weather is oppressive on the whole, but the winter is very bracing. The northern half of the district is quite healthy, and with one or two exceptions, the officers posted to this district have not had much to complain of. The natives of the district do not, however, escape the effects of malaria and almost every person has at least one or two attacks of fever in the autumn. Diseases of the eyes and skin are also common, due obviously to

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dirty habits and to bathing in dirty water. Venereal diseases prevail to a shocking extent, and persons of average respectability feel no disgrace in owning that they suffer from them.

Temperature.

The temperature in the hottest days goes up to 98° inside carefully closed rooms and sometimes even to 100°. In the verandah it ranges from 110° to 115°. Under shade, outside the houses it is known to have gone as high at times as 120°.

Rainfall.

This district being outside the ordinary sphere of the monsoons, the rainfall is very scanty, and what little rain falls comes from stray clouds and is, therefore, neither equally distributed over the different parts of the district nor regular as regards the months in which it is received. The average rainfall by tahsils is—

Sanáwan	...	...	... 6·58 inches
Muzaffargarh	...	...	... 5·8 „
Alípur	...	...	... 6·47 „

Roughly speaking, the average is about 6 inches in all the three tahsils, but in some years one tahsil gets 6 or 7 inches while another gets only one or two. The months of July and August are the most rainy, which is after all not saying much when the average of each of the months is about 1·4 inch. The rainfall is not large enough ordinarily to enable the growing of *báráni* crops (crops dependent solely on rain). That is why even in years when the quantity of rain comes up to 10 or 11 inches, no serious attempts are made at raising any crops not assisted by well or canal irrigation or by floods. The heaviest rainfall within the last 23 years was in 1892-93 when Sanáwan got 14 inches, Muzaffargarh 10 and Alipur 17. In 1901-2, on the other hand, Muzaffargarh received 2 inches of rain and the other two tahsils only half an inch each. A timely shower of rain, however, greatly helps the crops. The good and bad effects of rain on the crops are shown in the following extract from the Assessment Report of the Sanáwan tahsil :—

"The rain of Baisákh (April-May) is not useful anywhere, except in the Thal, where rain always helps wild grass, but the grass grown on Baisákh rain is considered bad, particularly for sheep and goats. Rain in Baisákh is distinctly injurious to wheat, whether the crop is standing or has been cut. Rain is needed in Jeth and Hár (May to July) for ploughings and sowing the kharíf and also for grass. Rain is needed in July and August for bringing the kharíf to maturity and for ploughings for the rabi. It is also useful for grass, but too much rain in these months weakens the grass. September, October and November rains are generally bad. They injure indigo, *bájra* and wheat land except in the Thal, where October and November rains are utilized for sowings. The rainfall of these months has not been large. Rain in the first half of December is distinctly bad for wheat, as it destroys the young offshoots. Rain in the latter half of December, throughout January and for the first half of February is greatly useful for wheat. It is very nutritive and the young stems split up into several offshoots, thus leading to an enhanced produce of both

Rainfall.

grain and straw. In February and March rain is supposed to help the growth of wheat and to produce a healthy ear. In March and the beginning of April, rain ripens the crops and makes the grain heavy, but in these two months rain is generally accompanied by hail, which is very destructive. Towards the end of April when wheat begins to ripen no rain is needed, as it does harm rather than good to the grain."

The following proverb is to the point:—

"Je vassé Phaggaṇ máhé
Tá ann na mávé ghábé,
Je vassé Phaggan Chetar
Tá ann na máve Khetr."

If it rains in Phaggan and Máh (*i.e.*, from the middle of January to the middle of March), the grain will not find room in the straw; if it rains in Phaggan and Chétar (*i.e.*, from the middle of February to the middle of April), the grain will not find room in the field.

Earth-quakes, cyclones and floods.

Shocks of earthquakes are felt now and again, but they are not violent and have never caused any considerable destruction. Nor have there been any notable cyclones. Dust storms are common during the months of May and June. They sometimes begin earlier and last longer. The district is now protected from one end to the other by a series of protective embankments under the charge of the Canal Department, so even in year of high flood no damage is done except in the riverain tracts.

The level of the Indus being higher than that of the Chenáb, and the slope of the lands being generally from west to east, the tendency of the Indus is always to spread into the district, and it made several inroads into the interior until the construction of the Sanáwan embankment in 1874 which has been successfully kept up since. Even in years, like 1889, and 1894—when the gauge at Attock registered 51 as the high flood level in the Indus—no injury was done outside the riverain tract. The town of Muzaffargarh is, however, protected from the Indus by the dorsal ridge of the Thal which runs past it down to Kinjhar in the shape of a wedge. It has, however, suffered at times from destructive floods in the Chenáb (Rávi, Chenáb and Jhelum combined) which in 1893 broke through the barriers of the embankments and flooded the whole countryside along its bank, including the town of Muzaffargarh, when almost every building was damaged. Indeed during the flood every one had to take shelter in the town which is situated fairly high, and the police station was the rendezvous of all officials who could reach there with official records. The district kutchery alone stood the flood, although there was a foot of water running all round it. This memorable flood washed a great deal of saltpetre down from the south of the Jhang district and the Rangpur side of the Muzaffargah *tahsíl*, and spoilt the best sugarcane and cotton growing lands in the Thal *tahsíl*. This was the year in which great damage was done

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by extraordinary floods in the Jhelum river in Kashmir. In 1903, when the floods were again destructive in Kashmir, the Chenáb began to cut into the head-works of the Ganeshwah, and there was the fear of the water forcing itself through the embankments and flooding the Muzaffargarh town once more. The danger was, however, successfully warded off.

Section B.—History.

Introductory.

The Muzaffargarh district, as a whole, had no complete history until it was united under the rule of Díwán Sáwan Mal. The history of the neighbouring governments is, however, relevant, because it is by it alone that we learn the origin of the tribes now living in the district, and the order in which they occupied it. The contemporary history will, therefore, be given as briefly as possible, more for the sake of ready reference when the tribes are described, than in order to record events which had their central interest in this district.

The Hindú dynasties.

From the earliest times this district followed the fortunes of the kingdom of Sindh. The Hindú dynasties of the Ráís and of the Brahmans ruled over a Jat population who are a branch of the Kshatriya or Rájpút race, and, for some reason not known, had been excluded from fellowship. These Rájpúts, who may be called aboriginal, are the ancestors of the Jats who form two-thirds of the present population, and all the other tribes are subsequent arrivals.

The Arab conquerors. The Sumrás. The Summás.

The first Arab conquerors held Sindh and Multán from 711 A. D. to 750 A. D., when they were expelled by a Rájpút tribe called Sumrá, whose representatives are still found in this district. In 1351 A. D., the Sumrás were expelled by the Summás, another Rájpút tribe, descendants of whom are to be traced among the Unnars of the Alípur *tahsíl*. The Summá rulers all bore the title of Jám. To this day *Jám* is used as a title of respect to Muhammadans who have a Sindhian origin. It was during the rule of these Rájpút tribes in Sindh and Multán, that an immigration of Rájpúts from Hindustán took place. It is to this that we owe the presence in the district of such tribes as the Siáls, Gurábas, Bhattís and Chhajrás.

The Langáh dynasty of Multán.

The next event bearing on the history of this district is the establishment of the Langáh dynasty in Multán. It ruled from 1445 A. D. to 1526 A. D. There are still Langáhs in this district, and it was during the Langáh rule that the independent kingdom of Sítpur was established by the Náhars in what is now the Alípur *tahsíl*. It was during this dynasty that the Biloches first emerged from the Sulemán mountains and occupied the country on the left bank of the Indus.

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Division of the district into four governments.

The establishment of the independent kingdom of Sítpur is the starting point of a connected history of the district. Henceforward the district is occupied by four governments. In the southern angle will be found the government of Sítpur held first by the Náhar family then by the Makhdúm of Sítpur, and lastly by the Nawábs of Baháwalpur. The west-central part of the district, opposite Dera Ghází Khán, was governed by the rulers of Dera Ghází Khán; first Mirrání Biloches, then Gujjars and Kalhoras, then by various governors directly appointed by the Durrání kings of Kábul, and finally by the Nawábs of Baháwalpur. The east-central and northern part of the district lying on the right bank of the Chenáb opposite Multán was nominally ruled by the Multán governors. The northern part of the district, including the Thal, after passing through a stage of anarchy, became subject to the governors of Mankera who were locally known as Nawábs of the Thal.

The first government in Sítpur.

The dynasty that established the Sítpur kingdom was the Náhar. In 1455 A.D. (854 A.H.) when Bahlol Khán Lodhí who had been governor of Multán became king of Delhi, he granted the country lying between the Indus[1] and the Sulemán range, south of a line drawn from Harand to Uch and north of Shikárpur in Sindh, to his relation Islám Khán Lodhí. This tract comprised what is now the south part of the Alípur *tahsíl* of this district, the southern part of Dera Ghází Khán district, and the northern part of Sindh. Islám Khán or his descendants took the title of Náhar. Islám Khán's grandsons, Kásim Khán, Salám Khán, and Táhir Khán, quarrelled and divided the country among themselves. The south part of the present Alípur *tahsíl*, the chief town of which was then Sítpur, fell to Táhir Khán. He established his rule there and died. From the establishment of the Náhar family to the present, 27 generations have occurred. The last of the Náhars was Bakhshan Khán, who was *jamadár* of *chaprásis* in the Alípur *tahsíl*, and who enjoyed a small allowance from Government for looking after the family tombs. The present incumbents of the office are widows. One of the Náhars built a fine tomb in his lifetime which still exists. His name was Táhir Khán, named *sakhí*, or the liberal. Another, named Alí Khán, founded Alípur. No other memorial of the Náhars exists. At the end of the fifteenth century the Biloches began to issue from the hills, and occupied the country on the left bank of the Indus, from Sítpur to Kot Karor in Leiah. In 1484 A. D. (887 A. H.) Hájí Khán, a Mirrání Biloch, founded Dera Ghází Khán and established a dynasty, the rulers of which alternately bore the titles of Hájí Khán and Ghází Khán.[2] These chiefs expelled the Náhars from the south of the Dera Ghází Khán district and pressed the Sítpur Náhars very hard. Treachery was at work at the very door of the Náhar. Shekh Rájú, Makhdúm of Sítpur, who was a counsellor of the Náhar, began to seize the

(1) It must be remembered that at this time the Indus met the Chenáb near Uch.
(2) The village in which Dera Ghází Khán stands is hence known as Háji Ghází.

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country for himself. He did not entirely expel the Náhars, for when he in his turn was overthrown by the Nawábs of Baháwalpur parts of the country were still in possession of the Náhar. The greater part, however, of the south of the district was governed by the Makhdúms in Sítpur. Until the inroads of Baháwalpur began, we hear nothing of the Náhar or of the Makhdúm's government. The Náhars appear to have been indifferent rulers. They left no public works behind them except Táhir Khán's tomb, and in this rainless and flooded country it is the criterion of a good governor that he should make canals and protective embankments. The title of Náhar was given to them for their rapacity. Popular stories attest their want of wisdom. One winter night the jackals were howling round Sítpur. Táhir Khán the Liberal asked his *Wazír* what made them howl. The *Wazír* answered "the cold." The Náhar ordered clothes to be made for them. Next night the jackals howled again, and the Náhar asked his *Wazír* what they were howling for. The *Wazír* replied "they are invoking blessings on you for your liberality." The Makhdúms of Sítpur, on the contrary, were good governors. They dug canals, extended cultivation, and one of them founded the town of Rájanpur in the Dera Ghází Khán district.

The Nawábs of Baháwalpur take Sítpur.

The divided and weakened state of Sítpur attracted the attention of the Nawábs of Baháwalpur first at the beginning of the eighteenth century. They ruled over the greater part of the district for a hundred years, and left their mark on it by their public works, and by introducing an organised revenue administration. The founder of the State of Baháwalpur was Sádik Muhammad Khán, son of Mullán Mubárak Khán, a distinguished resident of Shikárpur in Sindh. For some reason not ascertained, Sádik Muhammad Khán had to flee from the enmity of Núr Muhammad Kalhora, first of the Kalhora governors of Sindh. Sádik Muhammad Khán left Shikárpur in 1727 A. D. (1140 A. H.), and passed with his family and a body of followers through the Muzaffargarh district to Bet Dablí on the borders of Leiah. He was closely followed by the Sindh troops under Mír Sháh Dád Khán. A skirmish took place, in which the Sindhis were defeated. Then Sádik Muhammad Khán took refuge with the Makhdúms of Uch, who sent him to Hayát Ullah Khán, Governor of Multán, with their recommendations. Hayát Ullah Khán granted him the district of Choudhry, south of the Sutlej in *jágír*. Sádik Muhmmad Khán distinguished himself as an extender of cultivation, and a suppressor of robbers. His next promotion was the grant of the town and country of Faríd, a robber chief whom he defeated and killed with his follwers. In 1739 A. D. (1152 A. H.) Sádik Muhammad Khán obtained the title of Nawáb from Nádir Sháh, and in the anarchy following the invasion of Nádir Sháh, he succeeded in seizing the country bounded by the Sutlej on the north, Bíkaner on the east, Sindh on the south, and the Indus on the west. Sádik Muhmmad Khán was succeeded by his

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son Baháwal Khán, who founded the town of Baháwalpur and who is known as Baháwal Khán the Great. It was in the time of his successor, Mubárak Khán, that the Nawábs of Baháwalpur first established themselves permanently in this district. In 1751 A.D. (1164 A.H.) Mubárak Khán seized the country about Madwála, now a large village on the right bank of the Chenáb between Shahr Sultán and Alípur, just opposite the junction of the Sutlej and Chenáb, from the Náhars, and in the same year he took Bet Doma, a village and tract south of Sítpur, from Makhdúm Sheikh Rájú of Sítpur. Baháwal Khán II was the next Nawáb. In 1781 A.D. (1194 A.H.) he took the *parganah* of Jatoí from Makhdúm Sheikh Rájú of Sítpur. The native histories say that he took it on farm, but this is hardly credible. The Nawáb was the most powerful, and the Makhdúms were growing weaker every day. The Nawáb had already taken part of the Makhdúms' country by force, and was shortly to take the rest. It was about 1790 that the Indus left its old course which joined the Chenáb close to Uch and took the bed it now occupies. The south of the district was thus laid open to the attacks of Baháwalpur, and the Nawáb at once availed himself of the opportunity. He took without a contest Alípur, Shahr Sultán, Sítpur, and Khairpur, in short the remainder of the Alípur *tahsíl*, from the Náhars and the Makhdúm of Sítpur. He also proceeded to take the whole of the western and southern portion of the Muzaffargarh *tahsíl* from the rulers of Dera Gházi Khán, but we will leave him in possession of the Alípur *tahsíl* for the present, and give an account of the remaining governments that existed in this district.

The second government, Dera Gházi Khán.

It has already been stated that the Biloches occupied the left bank of the Indus at the end of the fifteenth century, and that in 1484 A.D. Háji Khán founded Dera Gházi Khán. His son was Ghází Khán, and alternate Háji Kháns and Ghází Kháns ruled until 1769 A. D. (1183 A. H.) As far as this district knows them they were good governors. They encouraged agriculture and excavated canals. One of them said to be the first Ghází Khán, founded the town of Kinjhar on the bank of the Indus. Mahmúd Gujjar was the son of one Yusuf. He became *Wazír* to the last Ghází Khán, and, under the pretext of saving the Government from conspirators, called in Ghulám Sháh Kalhora, governor of Sindh, who took Dera Ghází Khán, arrested the last Ghází Khán, and carried him a prisoner to Sindh, where he died. Ghulám Sháh left Mahmúd Gujjar as Governor of Dera Ghází Khán. He was maintained by the kings of Khurásán, and received from them Nawábship and the title of Ján Násár Khán. Mahmúd Gujjar ruled for 30 years, and was succeeded by his nephew Barkhurdár, who was superseded by governors sent direct from Khurásán. Mahmúd Gujjar has a great reputation as a good governor in this district. He bought much land which Government owns to this day. He built the fort of Mahmúd Kot. The Shiah Muhammadans in this

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district date from the time of the Kalhora invasion caused by Mahmúd Gujjar. After the Gujjars, a number of governors were sent direct from Khurásán. Anarchy prevailed on the left bank of the Indus, which prepared the country for the invasion of Baháwal Khán II in 1791. Here we may leave the Dera Ghâzi Khán, part of Muzaffargarh at the same point where we left Sítpur, and give an account of the part of the district that was subject to Multán.

The third government, Multán.

The Langáhs, already referred to, were expelled in 1529 A. D. by the Arghàns, nominally acting on behalf of Bábar and in Akbar's reign, Multán was incorporated in the Delhi empire as a *súbah* or province. Of the sub-divisions of the Multán province, the only two mentioned in the *Aín-i-Akbarí* are Rangpur and Sítpur. Though we know from general history that this district must have been sometimes subject to Delhi and sometimes to Khurásán, neither monarchy had much effect on its internal history, and the local chiefs carried on their public improvements and their little wars without interference from head-quarters. Occasionally, one of two rival competitors tried to strengthen his cause by obtaining a deed-of-grant from Delhi or Kábul. But a strong band of followers proved a better support than any *sanad* or *farmán*. A favourite saying of the local historians in describing the rise of some chief who, if a settled government had existed, would have been hung, is—

Udhar Dilhí di Sultanat men fatúr;
Idhar Sháhán Kabúl ki nazaron se dúr.

On that side anarchy in the Delhi kingdom;
On this side far from the eyes of the kings of Kábul.

It is well, therefore, as far as possible, to avoid all notice of the nominally central governments, and only mention extraneous history as far as it bears on the district. On this principle, Multán has no history connected with the district from the time of the Langáhs to the establishment of the Multání Pathàns, as they were called. These were a family of Saddozaí Afgháns, and a branch of the family to which Ahmad Sháh, Taimúr Sháh, Zamán Sháh, and Sháh Shujá, kings of Kábul, belonged. The first of the family who came to India was Husain Khán, who held Rangpur in this district in *jágír* in the time of Aurangzeb. Záhid Khán was the first of the family who became Nawáb of Multán. This was in 1738 A.D. Between the accession of Záhid Khán and that of his son Shujá Khán, simple anarchy prevailed. Shujá Khán was invested with the government of Multán in 1767 A.D. He founded Shujá-ábád in the Multán district opposite Khángarh. In his time the Bhangí Sikhs overran the country and occupied Multán, driving Shujá Khán to Shujá-ábád. To this day the raids and cruelty of the Bhangí Sikhs live in the memory of the peasants living along the right bank of the Chenáb. Shujá Khán was succeeded by his son Muzaffar Khán, but did not recover Multán till 1779 A.D., when he was reinstated by Taimúr Sháh, king of Kábul, who expelled the Sikhs and appointed Muzaffar

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Khán governor, with the title of Nawáb. Muzaffar Khán governed Multán till 1818 A.D. when Multán was besieged and taken by the Sikhs, and the Nawáb with five of his sons was killed. Muzaffar Khán's rule was a continued war. It is, however, only as a civil governor that we have to do with him, and it is surprising that he should have found time for making such improvements in the country on the right bank of the Chenáb. The country in this district attached to Multán, included the *taallukas* of Rangpur, Murádábád, Muzaffargarh, Khángarh and Ghazanfargarh. Muzaffar Khán dug canals, made embankments and extended cultivation. He established many persons of his own tribe in this part, a fact to be remembered when we come to relate the tenure of the Multání Patháns. In 1794 A.D. he founded the fort and town of Muzaffargarh. His sister Khán Bíbí built the fort and town of Khángarh, and his brother Ghazanfar Khán, the fort and town of Ghazanfargarh.

The fourth government. The Thal Nawábs.

The governors that occupied the north of the district, including the greater part of what is now the Sanánwán *tahsíl*, were first Mirrání Biloches. Addú Khán, a son of one of the Gházi Kháns, is said to have founded Kot Addú. When the fortunes of the Gházi Kháns became low, Mahmúd Gujjar succeeded as before related, and built the fort of Mahmúd Kot to maintain his authority in the Gházi Khán tracts on the left bank of the Indus. Next, a family of Jaskáni Biloches ruled the north of the district. Then follows an interval during which the Kalhoras of Sindh ruled, their chief being Abdul Nabí. He became unpopular on account of his tyranny, and objectionable to the Kábul king, because he did not pay the revenue. Muzaffar Khán, Nawáb of Multán, was sent to coerce him. Muhammad Khán, Bahádar Khel, officiated for Muzaffar Khán at Multán, and on his return was appointed Nawáb of Mankera and the Thal. Before he obtained possession he had to fight a battle with Abdul Nabí at Leiah, in which the latter was defeated and his son Muhammad Arif killed. This was in 1792 A. D. Muhammad Khán, Bahádar Khel, has left his mark on the north of the district by the canals which he dug. He appears to have been a good ruler, and though his name is forgotten, it is he that is referred to as the Nawáb of the Thal. He died in 1815 A. D., leaving a daughter who was married to Háfiz Ahmad Khán. Their son, Sher Muhammad Khán, succeeded to the Nawábship under the guardianship of his father. In 1820 Ranjít Singh took Mankera and drove the Nawáb to Dera Ismaíl Khán, of which his descendant is now titular Nawáb. The country under the Thal Nawábs was known as Kachchhi Shumáli, opposed to Kachchhi Janúbi, which was Baháwal Khán's dominion. That the word *kachchhi*, which means land subject to river-action (or close to the river) should ever have been applied to the Thal, strongly corroborates the tradition that the Indus at one time flowed down the Thal mentioned in the chapter on physical geography. At present it is hard to imagine anything less like a *kachchhi* than the Thal is.

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Union of the four governments.

We have now brought our four governments to the point where they begin to fall and to become united under one head. The process was completed in the thirty years between 1790 and 1820 A.D. We left Baháwal Khán II with the district lying open to him by the shifting of the Indus to the west, and having just seized those *taallukas* which now form the Alípur *tahsíl.* In the part of the district which had been ruled from Dera Ghází Khán there prevailed the anarchy which followed the rule of Mahmúd Gujjar. Between 1790 A.D. and the end of the century Baháwal Khán II took possession of the *taallukas* of Aráín, Kinjhar, Khor, Mahra, Serí and Trund, which now form the southern and western part of the Muzaffargarh *tahsíl.* This country and the Alípur *tahsíl* were called Kachchhi Janúbí, opposed to the Kachchhi Shumáli of the Thal Nawábs. He and his successor Sádik Khán II and Baháwal Khán III brought the country under a settled government, encouraged cultivation and excavated canals. The dates of their accessions and deaths are not on record until we come to Baháwal Khán III, who was the governor that helped Edwardes at the siege of Multán. He died in 1852 A. D. In 1818 A. D. the Sikhs took Multán, and the *taallukas* formerly governed by Muzaffar Khán, *viz.*, Rangpur, Murádábád, Muzaffargarh, Khángarh and Ghazanfargarh, were henceforward administered by the Sikh governors of Multán. In 1819 the Sikhs took Dera Ghází Khan, but Baháwal Khán remained in possession of his conquests. In 1820 the Sikhs took Mankera, from which the north of this district was governed. Baháwal Khán submitted to the Sikhs, and thus the whole district became united under the rule of Ranjít Singh. A re-distribution then took place. Baháwal Khán was confirmed in his conquests, which were farmed to him for a sum the amount of which, as every historian, native and European, gives it differently, had better be omitted. The northern part of the district continued to be governed from Mankera, and Muzaffar Khán's *taallukas* were governed from Multán. The Multání Patháns fled the country, and went for the most part to Dera Ismaíl Khán, not to return until the English came in 1849 A. D. In 1822 the celebrated Sáwan Mal, who was *peshkár* to the governor of Multán, Bhaya Badan Hazári, fell out with his superior officer, and the *taallukas* of Muzaffargarh, Murádábád and Ghazanfargarh were given to him by Ranjít Singh in farm. Baháwal Khán failed to pay the sum for which his country was farmed to him. General Ventura was sent from Lahore with an army, and drove the Baháwalpurians out of the district and across the Chenáb which has since formed the boundary between this district and Baháwalpur. How the north of the district joined Multán is not clear; but in 1829, the whole of the present district of Muzaffargarh was united under Díwán Sáwan Mal, governor of Multán.

The united government under Sáwan Mal.

Though under the Baháwalpur Nawábs parts of the district had enjoyed a fairly settled administration, Sáwan Mal's govern-

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ment was better than anything that had preceded it. Its sole object was the accumulation of wealth for the Díwán. The execution of public works, the administration of justice, and security of life and property, were a secondary consideration, and were insisted on only because without them agriculture would not prosper, and the revenue would not be paid. When one examines his numerous cesses and sees how he levied dues to pay the people's alms and perform their religious duties, and then paid the poor and the Brahmans what he thought a fair amount and pocketed the rest ; how he levied a cess in return for keeping his word, and how he encouraged his officials to take bribes and then made them duly credit the amount in the public accounts,—one's admiration for the great Díwán is less than it would be, if based on history. The district was divided into the 23 *taallukas* mentioned below[1]—

MUZAFFARGARH.

Aráin.	Khángarh.	Mahra.
Sámti.	Kinjhar.	Khorán.
Murádábád.	Seri.	Muzaffargarh.
Rangpur.	Trund.	

ALIPUR.

Shahr Sultán.	Sítpur.
Jatoi.	Dháka.
Ghalwán.	

SANANWAN.

Mahmúd Kot.	Kot Addú.
Nauábád.	Dáira Dín Panáh.
Sanánwán.	Bhukkhi.

Munda.

Each *taalluka* was governed by a *kárdár*, a *muharir*, and a few soldiers. A better account of how the government was carried on cannot be given than by translating a specimen of the instructions given to a *kárdár*—

1. "Treat the subjects well. Work in extending cultivation. Collect the revenue with acuteness. Every harvest and every year let cultivation and the revenue increase.

2. "Protect the *taallukas* effectually. Let not theft and wickedness occur. If a theft takes place, before all things cause restitution to be made to the complainant, search for the thief, imprison him, and after two months send the list of thieves to me for suitable orders—imprisonment or fine.

(1) These divisions are shown in a map appended to Mr. O'Brien's Settlement Report.

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3. "Send the revenue punctually in the following instalments:

"*Kharif.*"	"*Rabi.*"
1st instalment, 15th Manghir.	1st instalment, 15th Jeth.
2nd instalment, 15th Poh.	2nd instalment, 15th Harh.
3rd instalment, 15th Mangh.	3rd instalment, 15th Sáwan.

4. "On Harh 1st, send a list of the current prices, signed by honourable *pan hes* and *zamíndárs*.

5. "Every year in the month of Badra come to my office and settle your accounts.

6. "Settle cases of the hither and further bank of the Ghára by means of letters to the *vakíls* stationed at Ahmadpur and Baháwalpur, and to the *kárdárs* of that state, with politeness, and secure your object.

7. "Perform the clearance and excavation of the canals in time, that the irrigtors may not have to wait, and that time may not pass.

8. "When you go to appraise or divide crops, or to assess revenue, make the papers of the *muharrir*, *dumbir* and *panch* agree. Let there not be discrepancy.

9. "Act according to the before-mentioned provisions of this *áín*. Let there be no difference from it. Subsist on your pay. Covet not from any one, and rest your hopes on no one, nor let your *muharrirs* do so. If you do, you are strictly responsible.

10. "Pay the soldiers with your own hands according to the fixed scale, and deduct whatever deductions are due from them.

11. Here are entered the names and pay of the *kárdár*, *muharrir* and other servants.

In spite of the warning against extortion, the *kárdárs* were allowed to receive *nazaránás* and subsistence allowance when they went on government duty, such as measuring crops. The subsistence was on the following scale:—flour 3 sers, *ghi* ¼ ser, *dal* ¼ ser, gram for horse 3 sers, spices 1 anna. *Nazaránás* had to be paid into government. There were five grades of *kárdárs* who received from Rs. 15 to Rs. 60 per month, and five grades of *muharrirs* receiving from Rs. 8 to Rs. 20 per month. Soldiers were divided into the War and Revenue departments. A *sowár* in the War department received Rs. 15 to Rs. 20, and in the Revenue department Rs. 12 a month. Foot soldiers in the War department received Rs. 7 and Rs. 6 and in the Revenue departments Rs. 3 and Rs. 5. There are few personal details of Sáwan Mal's government which relate to this district. How he excavated and improved canals has been already told. How he created or extended the tenure called *chakdári* will be described among the tenures, and his revenue system will be described in its

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proper place. During the rule of Sáwan Mal a large number of Labána colonists from the Punjab settled here. There are now more Labánas in Muzaffargarh district than in all the other districts off the Multán and Deráját divisions put together.

Díwán Múlráj.

Sáwan Mal died on the 29th September 1844, and was succeeded by his son Múlráj, of whom nothing particular connected with this district is known. When Múlráj broke into rebellion, Lieutenant Edwardes' troops passed through this district from Kureshi ferry on the Indus across the Chenáb, just before the battle called by Edwardes that of "Kineyree," which took place at the village of Jalálpur Khaki in the Shujábád *tahsíl* of the Multan district. Before Edwardes marched through this district, while Múlráj's troops under Har Bhagwán Singh occupied Dáira Dín Panáh, Kot Addú and Kureshi, the *zamíndárs* of Jatoi had robbed Prabh Diál, the *kírdár* of Jatoi, and made him over to the servants of the Nawáb of Baháwalpur. A force of 200 men under Jawáhar Mal, Aimanábádí, was sent from Kureshi to punish the people of Jatoi. The Baháwalpur troops, 1,500 in number, under Muiz-ud-dín Khan, Khagwání, crossed the Chenáb and met Jawáhar Mal at Alípur. Jawáhar Mal, seeing himself outnumbered, fled. The Baháwalpur troops killed a hundred of his soldiers and pursued Jawahar Mal nearly to Khángarh, where he found a refuge.

The Mutiny.

The following account of the events of 1857 is taken from the Punjab Mutiny Report. Major Browne observes on this district:—

"The district of Khángarh entirely escaped any ill effects beyond the alarm felt by the European community at the proximity of the mutinous regiments at Multan and the possibility of invasion of the lower portion by bands of robbers from Baháwalpur."

Precautions were, however, necessary. Mr. Henderson, the Deputy Commissioner, fortified the jail, the court-house, and the chief and district treasuries, armed all Europeans, and vigilantly guarded all the ferries which were not closed. He detached Lieutenant Ferris, Assistant Commissioner, to the banks of the Chenáb to establish a chain of posts along it. This object was fully accomplished. The villagers themselves served so willingly that a cordon of 104 posts, extending 26 miles, was soon established. At another time a chain of mounted police was thrown across the district from the Chenáb to the Indus, to cut off any stragglers of the 14th Native Infantry that might come down from Jhelum. An intelligence department was also organized between Khángarh, Dera Ghází Khán, Multán and Muzaffargarh.

Constitution of the district and charge of boundaries.

In April or May 1849 the British districts of Khángarh and Leiah were formed. Khángarh contained the present *tahsíls* of Muzaffargarh and Alípur, and the *taallukas* of Garh Mahárája and Ahmadpur, which are now in Jhang. Khángarh was first named as the head-quarters of the district, but before the end of 1849 they were removed to Muzaffargarh. Khángarh contained four *tahsíls*—

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Rangpur, Khángarh with its head-quarters at Muzaffargarh, Kinjhar and Sítpur. What is now the Sanánwán *tahsíl* was in the Leiah district, and had its head-quarters at Kot Addú. In 1859 the Sanánwán *tahsíl* was separated from Leiah and added to this district, and the district took the name of Muzaffargarh, and was attached to the Multán division. It was in 1861 that the district took its present shape. The Rangpur *tahsíl* was abolished. The *taallukas* of Garh Mahárája and Ahmadpur were joined to Jhang, and the rest of the *tahsíl* was attached to Muzaffargarh *tahsíl*. The area received by transfer from Leiah was 140 and that transferred to Jhang 54 square miles. Since then 17 villages were transferred by the river from Multán to Muzaffargarh, and the same number from Muzaffargarh to Multán. The Kinjhar *tahsíl* was abolished and its *taallukas* added to Muzaffargarh.

Fixed boundary with Dera Gházi Khán, Multán and Baháwalpur.

Since then 31 villages have been transferred to the Multán district and 11 to Dera Ghází Khán owing to changes in the course of the rivers while 3 have come over from Multan, 4 from Dera Ghází Khán and one from the Baháwalpur State. Steps taken at the recent settlement to put an end to this constant transfer of territory are described in the Settlement Report of the second Regular Settlement from which an extract is given below :—

"At last settlement the river Indus formed the boundary between the Dera Ghází Khán and Muzaffargarh districts. All land up to the bed of the river was measured up and included in this district. Measurements were similarly made as far as the river in the Dera Ghází Khán district at the settlement which preceded that of Muzaffargarh. The river was supposed to be measured on neither side, but the course of the river being not exactly the same during the settlement of Dera Ghází Khán and that of Muzaffargarh, many plots of land got included in villages on either side of the river. Boundaries of villages were fixed and the transfer of a piece of land to one or the other side of the river, did not involve any change in the proprietary rights. Nevertheless, whole villages were transferred from one district to the other for convenience of administration, on account of changes in the course of the river. A comparison of the boundaries of villages was undertaken during the recent settlement of the Dera Ghází Khán district with a view to having a fixed boundary of the two districts. The difficulties experienced in the work were thus described by Mr. Diack in paragraph 78 of his final Settlement Report: 'In the case of Muzaffargarh and Dera Ghází Khán boundary, more difficulty was experienced. The boundaries of riverain villages in the two districts were not compared at Regular Settlement, and consequently many pieces of land were measured as portions of the Dera Ghází Khán villages in the one settlement and portions of Muzaffargarh villages in the other, while much land in the bed of the river was left unmeasured in both settlements and became the object of much contention when thrown up by the river. All questions connected with such land have, with the exception of three cases, been disposed of by the Deputy Commissioner of Muzaffargarh and myself in concert. The three cases will be finally decided at the settlement of that district (Muzaffagarh) now in progress.' The three remaining cases were taken up during this settlement and have been decided in consultation with the Deputy Commisssioner, Dera Ghází Khán. By Punjab Government Notification No. 553, dated 11th September 1897, the common boundary of the villages enumerated in a

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list appended thereto was declared to be the common boundary of the two districts and the common boundaries of all the villages having now been determined a complete common fixed boundary has now been arrived at between the two districts. It may be noticed here that in measuring the riverain villages of the Sinánwán tahsil it appeared that the boundary of the border villages of the Dera Ghází Khán district shown on the Dera Ghází Khan maps did not correspond to that existing on the ground. These cases were taken up and after much discussion and enquiry decided by the Deputy Commissioner of Dera Ghází Khán and myself without dissent, with the exception of one case which had owing to our difference of opinion to be referred to the Commissioner of the Division. With the Commissioner's permission steps were taken to correct the maps of the Dera Ghází Khán district. The case of the boundary between the Multán and Muzaffargarh districts was also similar. Most of the villages had fixed boundaries, but the area in the bed of the river had been left unmeasured, and at the settlement of each district the area as far as the river had been measured as belonging to that district. Seven villages, however, had the ever changing deep stream boundary modified by the rule of avulsion or (*chakkars*). The question of having a fixed boundary for these villages was taken up on both sides, and after some difficulty the majority of landowners in all the villages but one agreed to have a fixed boundary and referred the determination of the boundary to arbitration. The boundary thus arrived at was put down in the revenue records as the fixed boundary. The boundary in the remaining case was fixed under the Riverain Boundaries Act, Punjab, I of 1899. Proceedings were also undertaken under the Act in the other cases where the rule of deep-stream had governed the boundary so far, and the boundary fixed by consent of parties or by the award of arbitrators was declared to be the permanent boundary.

The boundary with the Baháwalpur State lay on the Chenáb river and was throughout governed by the modified deep-stream rule. The deep-stream had to be determined every year and numerous petty, and sometimes very serious and complicated, disputes arose from time to time in respect of alluvial land, avulsed land and *mahaz* lines, (lines projecting towards the river), involving the waste of much time and labour. Following the course adopted in laying down a fixed boundary between Dera Ghází Khan and Baháwalpur, I was directed in Settlement Commissioner's letter No. 197, dated the 29th January 1901, with reference to paragraph 7 of Revenue Secretary to Punjab Government's letter No. 121, dated 2nd November 1900, to arrange in communication with the Baháwalpur authorities for determining a fixed boundary between Baháwalpur and Muzaffargarh on the principle that the boundary of that year according to previous custom should be accepted as the permanent boundary for purposes of jurisdiction and that where the river flowed between the two States the existing river bed should be equally divided between them. In order to have a complete map of the whole boundary and all points in dispute, the squares laid down in the boundary villages were taken down to the river and across it to the Baháwalpur villages. The whole riverain tract was measured up jointly by the officials of the two sides and from the filed maps (on 40 *karams*=1 inch scale) of the villages measured up, a collective index may on the 4 inches to a mile scale was prepared. This map which showed the deep-stream of 1900-01, formed the basis of our decision. The boundaries of *chakkars* (avulsed land) which had been previously settled from time to time were first overhauled and agreed to after much haggling and discussion, but it was in the drawing of the *mahaz* lines (*i. e.*, projecting the boundary lines towards the river and deter-

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Fixed boundary with Dera Ghází Khán, Multán and Baháwalpur.

mining the area to be divided) that the chief disputes arose. After much trouble, however, all the disputes were amicably settled and a fixed boundary was agreed upon with the Baháwalpur State with the exception of a village, Betwaghwar, at the extreme south in respect of which the Baháwalpur authorities wished to press a claim which they had made originally against the Dera Ghází Khán district. The boundary agreed upon was accepted by the Punjab Government in their letter No. 112, dated 3rd March 1903, and the disputed case about Betwaghwar between Muzaffargarh, Dera Ghází Khán and Baháwalpur was finally decided by the Punjab Government in their letter No. 591, dated 29th May 1903, the boundary proposed by me being accepted. The whole boundary between the two States has now been fixed. The zamíndárs were consulted in the settlement of the boundary and the landowners in the opposite villages have agreed in each case to the boundary decided upon. The boundary of the two States forms the boundary of proprietary rights. The question of proprietary rights in land transferred by the boundary settlement arose only in one case (*viz.*, that of Kachilál) where a large area in proprietary possession of the owners of Kachilál at last settlement went over to the Baháwalpur State. The dispute was settled on a promise of the Mashir Mal to have a grant of proprietary rights sanctioned by the State to the persons recorded as owner of the land in our settlement papers. The fixed boundary has been marked on the ground as far as possible and steps have been taken to erect permanent marks to facilitate the laying down of the boundary which is now under the river, whenever the land is alluviated. This settlement of the boundary has put an end to an immense amount of work in the way of boundary disputes which often resulted in serious quarrels between the landowners on opposite sides."

Beyond these changes in the limits of the district, there have been no events of interest other than those connected with ordinary district administration.

The only political colonists, who were introduced during British rule, were the Multání Patháns who returned and partly recovered the lands from which they had been expelled in 1818 A. D. by the Sikhs.

List of Deputy Commissioners.

The following is a list of the Deputy Commissioners who have administered the district since annexation:—

Years.	Names.	From	To
1849	Mr. Wedderburn	...	...
	Mr. J. H. Prinsep	...	...
	Lieut. James	...	...
1850-57	Lieut. Farrington	...	...
	Capt. Voyle	...	...
	Lieut. McNeile	...	...
	Lieut. Tighe	...	...
	Capt. Bristow	...	...

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List of Deputy Commissioners.

Years.	Names.	From	To
1858	Mr. Henderson	...	...
1859	Capt. Bristow	...	...
	Capt. Maxwell	...	...
1860	Lieut. Tighe	...	...
1861	Capt. J. S. Tighe	1st January 1861 ...	31st July 1861.
	Capt. T. F. Forster	1st August 1861 ...	31st October 1861.
1826	Capt. J. S. Tighe	1st November 1861 ...	31st July 1862.
1862-65	Capt. H. J. Hawes	1st August 1862 ...	24th October 1865.
	Mr. R. G. Melvill	25th October 1865 ...	24th December 1865.
1866	Major H. J. Hawes	25th December 1865 ...	8th April 1866.
	Capt. R. G. Melvill	9th April 1866 ...	16th December 1866.
1867-68	Major H. J. Hawes	17th December 1866 ...	2nd May 1868.
	Capt. Armstrong	3rd May 1868 ...	14th June 1868.
1869	Capt. J. Fendall	15th June 1868 ...	30th April 1869.
	Mr. G. E. Wakefield	1st May 1869 ...	31st October 1869.
1870	Capt. J. Fendall	1st November 1869 ...	28th July 1870.
	Mr. M. Macauliffe	29th July 1870 ...	7th September 1870.
1871	Capt. J. Fendall	8th September 1870 ...	27th May 1871.
	Capt. F. J. Miller	28th May 1871 ...	9th June 1871.
1872	Mr. F. D. Bullock	10th June 1871 ...	9th February 1872.
	Lieut. F. J. Miller	10th February 1872 ...	22nd March 1872.
1878-75	Mr. J. D. Tremlett	23rd March 1872 ...	16th August 1875.
1875	Mr. F. E. Moore	17th August 1875 ...	5th November 1875.
1876	Mr. J. D. Tremlett	6th November 1875 ...	3rd June 1876.
	Mr. D. B. Sinclair	4th June 1876 ...	3rd July 1876.
1877	Mr. J. D. Tremlett	4th July 1876 ...	8th March 1877.
1878	Major F. D. Harrington	9th March 1877 ...	8th December 1878.
1879	Mr. M. Macauliffe	9th December 1878 ...	9th May 1879.
	Mr. Edward O'Brien	10th May 1879 ...	26th October 1879.
1880	Mr. M. Macauliffe	27th October 1879 ...	7th March 1880.
	Mr. Edward O'Brien	8th March 1880 ...	31st May 1881.
	Mr. C. E. Gladstone	2nd May 1881 ...	17th July 1881.
	Mr. H. W. Steel	18th July 1881 ...	24th November 1881.

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List of Deputy Commissioners.

Years.	Names.	From	To
	Mr. Edward O'Brien	25th November 1881 ...	31st May 1882.
1882	Mr. C. E. Gladstone	1st June 1882 ...	11th June 1883.
1883	Mr. R. Maconachie...	12th June 1883 ...	26th July 1883.
	Mr. C. E. Gladstone	29th July 1883 ...	26th October 1883.
	Mr. A. H. Benton	17th October 1883 ...	10th November 1884.
1884	J. C. Brown, Esquire	11th November 1884 ...	4th June 1886.
1886	H. Meredith, Esquire	5th June 1886 ...	15th August 1886.
	T. C. Brown, Esquire	16th August 1886 ...	17th February 1887.
1887	H. W. Steel, Esquire	18th February 1887 ...	24th April 1888.
1888	Sardar Gurdial Singh, Man ...	25th April 1888 ...	22nd June 1888.
	H. W. Steel, Esquire	23rd June 1888 ...	19th April 1889.
1889	Sardar Gurdial Singh	20th April 1889 ...	5th March 1893.
1893	Captain F. E. Bradshaw	6th March 1893 ...	24th April 1893.
	" C. M. Dallas	25th April 1893 ...	6th November 1893.
	" C. P. Egerton	7th November 1893 ...	20th November 1893.
	" C. M. Dallas	21st November 1893 ...	13th August 1894.
1894	Diwan Narindra Nath	14th August 1894 ...	14th October 1894.
	Captain C. M. Dallas	15th October 1894 ...	18th July 1895.
1895	R. Love, Esquire	19th July 1895 ...	19th August 1895.
	Captain C. M. Dallas	20th August 1895 ...	25th February 1896.
1896	C. L. Dundas, Esquire	26th February 1896 ...	2nd April 1896.
	Captain F. E. Bradshaw	3rd April 1896 ...	24th March 1897.
1897	R. Love, Esquire, ...	25th March 1897 ...	19th August 1897.
	A. J. W. Kitchn, Esquire	20th August 1897 ...	14th October 1897.
	Maulvi Inam Ali	15th October 1897 ...	21st October 1898.
1898	E. A. Estcourt, Esquire	22nd October 1898 ...	20th January 1899.
1899	Maulvi Inam Ali	20th January 1899 ...	13th October 1899.
	Captain H. S. Fox-Strangways ...	13th October 1899 ...	1st May 1901.
1901	Sheikh Asghar Ali	1st May 1901 ...	17th June 1901.
	Capt. H. S. Fox-Strangways ...	17th June 1901 ...	4th October 1901.
	A. J. W. Kitchn, Esquire	4th October 1901 ...	29th October 1901.
	Sheikh Asghar Ali	29th October 1901 ...	2nd September 1903.
1903	A. L. Danson, Esquire	3rd September 1903 ...	2nd October 1903.

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List of Deputy Commissioners.

Years.	Names.	From	To
	Sheikh Asghar Ali	2nd October 1903 ...	31st October 1905.
1905	R. T. Clarke	1st November 1905 ...	13th August 1907.
1907	N. H. Prenter	14th August 1907 ...	21st October 1907.
1908	R. T. Clarke	22nd October 1907 ...	16th February 1908.
	J. M. Dunnett	17th February 1908 ...	20th October 1908.

Archæological remains.

There are no places of archæological interest in the district.

Section C.—Population.

Density.

Table 6 of Part B gives statistics of density of population. For the whole district collectivelly: the more important figures are noted below:—

			1881.	1891.	1901.
Density of population per square mile of	Total area ...	Total population	90	111	119
		Rural population	86	108	115
	Cultivated area	Total population	545	552	557
		Rural population	527	535	501
Number of persons per occupied house...		Villages	5·4	5·6	5·3
		Towns	5·1	4·6	5·1
Percentage of total population which lives in villages.		Persons	...	...	96·9
		Males	...	...	96·8
		Females	...	...	96·9
Average population per village			...	...	561·
Ditto ditto and town			...	...	576·
Number of villages per 100 square miles			...	...	20·5
Average distance from village to village in miles			...	...	2·29

Owing to the peculiar constitution of what most nearly corresponds in Muzaffargarh with the "village community" of the Punjab, the "villages" are for the most part collections of a greater or less number of plots of land surrounding wells, while the men who have sunk these wells and brought the adjacent land under cultivation, have often little real connection with the owners of other wells within the village boundaries. Hence, instead of the

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whole village community being collected in the common homestead, many of the cultivators reside permanently at their wells, so that instead of one defined *ábádí* (village site), the population occupies a series of detached hamlets, scattered over the face of the country. It must, however, be understood that these hamlets are not the "villages" of the census returns. The latter includes an aggregation of hamlets together forming a fiscal village. The village unit, in fact, of the Census returns is the fiscal, not the actual village. It will be noticed that the increase in population has resulted in an increase of density with reference to the total area, but the increase of cultivation has more than relieved the tension. The population is mainly rural. The average size of a family both in towns and villages is 5 persons including children.

Distribution by tahsils.

The distribution of population by *tahsils* is shown in the following table :—

Tahsil.	TOTAL POPULATION.			Density per square mile of total area.
	Total.	Males.	Females.	
Muzaffargarh	174,970	95,175	79,795	192
Alipur	130,595	70,680	59,915	142
Sinawan	100,091	54,352	45,739	77

Distribution of population.

The most thinly populated tract in the district is the Thal which is included mostly in the Sinawan *tahsil*. Next in density of population comes the riverain tract of which the Alipur *tahsíl* has the largest share. The most thickly populated is the central canal-irrigated tract; and the greater part of this falls in the Muzaffargarh *tahsil*.

Towns.

There is no town in the district with a population of over 5,000 souls. The number of villages and towns possessing from 2,000 to 5,000 inhabitants is only 26 in the whole district. The population of the towns is given below :—

Tahsil.	Town.	Population.	REMARKS.
Muzaffargarh	Muzaffargarh	4,018	Municipality.
Do.	Khangarh	3,621	Ditto.
Alipur	Alipur	2,788	Ditto.
Do.	Khairpur	2,257	Ditto.

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The town population is a mixed one, more than half of the inhabitants being Hindus representing trading classes. The richer Hindus, even when they live upon land, prefer residing inside towns. The Mussalman population of towns consists largely of artisans.

Villages.

There are 407 villages altogether in the district. The villages, as has been explained, are nothing more than groups of wells and lands attached to them. Cultivation in every part of the district depends more or less on wells, and since the working of wells needs constant attendance, every well has a little hamlet of its own. Some of these *ábádís* are larger than the others, and where a number of wells lie close to one another and there are advantages of communication, or where there is some place of religious sanctity, the hamlet becomes a strong one and grows sometimes into a large homestead. In this way the largest *ábádí* in a village is sometimes known by the name of the village, but oftener than not, none of the *ábádís* in the village area corresponds to it. The tendency of the insecure times of old when people preferred living together in enclosed or fortified places has been reversed in consequence of the security of life and property.

Grouping of houses.

The small well *ábádí* consists usually of a few huts for the tenants or cultivating landlords and a shed or two to accommodate the cattle. It is built as close to the well as possible. The next larger hamlets, where a whole family of proprietors lives on a well is made of houses built together anyhow with the door of each house facing open ground. The still larger *ábádís* where several families live together with a few artisans are arranged so that there is a lane or street running through the centre and a few lanes by way of reaches to the houses built in the interior. The arrangement of houses in the larger villages or towns is more systematic, and there are regular streets and lanes. The shops are always built in the central street and the dwelling houses do not usually open into the main street. The artisans usually live at one end or on the skirts of the village. Owing to excessive heat, the main street of a town is often roofed. At Muzarffargarh or other towns which are being extended, the streets are too broad to be roofed, but in the old towns of the Alipur tahsil, for instance, the style of comparatively narrow streets still exists.

Growth of population.

The total population registered at the last four censuses is compared below:—

Census.	Total.	Male.	Female.
1868	298,180	163,583	134,597
1881	338,605	184,510	154,095
1891	381,095	206,924	174,171
1901	405,656	220,207	185,419

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Growth of Population.

The total population has increased steadily since 1868. The increase ascertained at the census of 1881 and 1891 was 13·5 and 12·5 per cent. respectively. This rate was not maintained in the following decade when the increase was only 6·4 per cent., but it is quite likely that some of the improvement shown in 1881 and 1891 may have been due to improvements in the method of enumeration at the census, and some of it to a large influx of immigrants from other districts. The district is not subject to famines and has not had any violent visitations of epidemics. There has, therefore, been nothing particular to retard the growth of population. The female population has kept pace with the growing male population. According to the figures of the last census the growth of population had, during the preceding decade, been general except in the Thal proper, where successive years of drought and a rigid fixed assessment had induced the graziers to drive their cattle to other parts of the district, and well-owners to abandon their wells and to work as tenants in other circles.

Migration.

The statistics of migration are given in tables 8 and 9 of Part B. The following table which gives the more important figures will show that the number of immigrants to the district largely exceeds that of the emigrants. The immigrants are mostly of the tenant class and are attracted to this district owing to the extensive river front and the facilities of canal irrigation in the interior of the district :—

	Persons.	Males.	Females.
IMMIGRANTS.			
1. From within the Punjab and North-West Frontier Province.	35,499	20,258	15,241
2. From the rest of India	2,092	696	1,396
3. From the rest of Asia	959	794	165
4. From the other countries	2	1	1
Total immigrants	38,552	21,749	16,803
EMIGRANTS.			
1. To within the Punjab and North-West Frontier Province.	16,920	9,891	7,029
2. To the rest of India	82	56	26
Total emigrants	17,002	9,947	7,055
Excess of immigrants over emigrants ...	21,550	11,802	9,748

The Indians from outside Punjab enumerated in the district were mostly Bágaris (Hindus) from Bikáner, etc., who visit the District in small numbers almost every year in search of employment travelling up through Baháwalpur. In years of drought and famine the batches are very large. Considerable parties of Powindahs from across the North-West Frontier come to

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Migration.

the district every year, partly for grazing their camels in the Thal and partly for manual labour. They usually build mud walls or sell sundry articles of merchandise and start back for their homes at the end of winter. These Powindahs constitute the bulk of non-Indians—Asiatics enumerated in the district. The Europeans included in the population are the district officers.

The district to which the immigrants from the Punjab and the North-West Frontier Province belong are given below :—

District, State or Province.	Total Immigration.	Number of males in 1,000 immigrants.
Jhelum	1,423	640
Jhang	4,577	573
Multán	8,621	532
Dera Gházi Khan	8,227	576
Dera Ismail Khan	4,197	559
Baháwalpur	3,807	524
Other Districts and States in the Punjab and North-West Frontier.	4,647	658

It will be noticed that the adjoining districts of Multán and Dera Gházi Khan are drawn largely upon, and that the Dera Ismail Khan and Jhang districts and also the Bahawalpur State supply a considerable number of residents to the district. The interchange of population with adjoining districts is a natural process, but here the influx of population is much larger than emigration as the next following table will show. Multán having originally been the seat of Government, close connection between the population of the two districts has existed for a long time, and persons born in that district have found it convenient to colonize the waste land in the Muzaffargarh district. Similarly the Dera Gházi Khan and Baháwalpur people have for a considerable time found it profitable to take up cultivation in this district. The connection of this district with Dera Ismail Khan is through Multáni Patháns who reside in Dera Ismail Khan but own lands and possess jágírs in this district. In years of drought people travel down from the Jhelum district and settle down as tenants particularly on riverain lands. The Census Report does not show any such immigrants from the Miánwáli district, but there are large numbers of men belonging to the Miánwáli district, known by

(1) Now partly Mianwali District

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Migration.

the term Balhoras who have settled down as tenants along the Indus. The following table gives the figures of emigration from the district :—

District, State or Province.	Male.	Female.
Jhelum	21	10
Miánwáli	563	516
Jhang	321	269
Multán	4,575	3,516
Dera Ghází Khan	2,783	1,820
Dera Ismail Khan	36	15
Baháwalpur	879	526
Other Districts and States in the Punjab and North-West Frontier.	713	357

The only noticeable figures are those of the exodus to Multán and Dera Ghází Khan which is due to close connection with the adjoining districts.

Age.

Figures relating to age are given in table 10 of Part B. The distribution of population into different stages of age is noted below for both sexes :—

Age period.	OUT OF EVERY 10,000 OF TOTAL POPULATION.		
	Males.	Females.	Total.
0—5 years	777	735	1,512
5—10 „	803	713	1,516
10—15 „	693	477	1,170
15—20 „	403	341	744
20—25 „	400	399	799
25—30 „	479	427	906
30—35 „	469	393	862
35—40 „	324	229	553
40—45 „	305	258	563
45—50 „	186	135	321
50—55 „	218	173	391
55—60 „	85	67	152
60 and over	283	228	511

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Age.

Children under 10 years of age represent 30 per cent. of the population, while the percentage of persons living after the age of 60 is only 5. The people are not particularly short lived, and several persons live up to the age of 80. A case has been known of an old peasant residing in the Thal after the Census of 1901 who was said to be considerably over 100 years of age. He estimated his age at 120, but according to the dates of events which he could allude to, he could not have been much under 110 years. The old man was quite hale and hearty, and though somewhat bent down, could walk about with ease and drive the bullocks round the Persian-wheel of his well.

Vital statistics; system of registration.

In Municipal towns births and deaths are registered by the Municipal staff. In the villages, however, the village chowkídár is made responsible for taking notes in books, regularly kept for this purpose, of all births and deaths occuring within his charge. The entries are checked by the supervising officers of Revenue, Police and Sanitation Departments, and the chowkidar brings his book to the police station once a week to report the statistics registered since his last visit, which are transferred to the regular registers maintained for the purpose.

The system is obviously the best practicable, and has been considerably improved of late. But it is far from perfect yet, and it is difficult to say that no births or deaths escape registration or that the causes of death reported are always the correct ones.

Birth and death rate.

According to the latest figures available, the birth-rate per *mille* of population is:—Males, 21·6; females, 19·0; both sexes, 40·6. The births in this district are, therefore, a little above the provincial average of 39·3. The number of males born is always somewhat in excess of the females. The average death-rate, on the other hand, is 27·5 against the provincial average of 32·5 per *mille*. The death-rate among males is 27·0 whilst that amongst females is 29·4. On the whole, the district is a progressive one with respect to population compared with the provincial averages, but comparatively the smaller birth-rate and the larger death-rate among the females is a noticeable feature of the district, which leads to paucity of the female sex, and consequently to the necessity of paying large prices for imported wives.

Diseases.

Cholera breaks out very seldom, and the deaths from this cause are not at all considerable. Small-pox proves more fatal in some years. In 1902 it carried away as many as 762 persons. Fever is, however, the most destructive ailment in the district, and accounts for 8,000 to 15,000 deaths a year. The excessive moisture caused by inundation in the rivers and by inundation canals in the greater part of the district gives rise to malaria.

Pneumonia and bronchitis are common in winter and a man is often reported to have died from fever when the

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cause of his death really was pneumonia. The following extract from the old Gazetteer gives a correct description of the fatal diseases in the district:—

"The diseases most prevalent in the district are malarial fevers, skin and eye diseases, enlarged spleens, bronchitis, pneumonia and ulcers. The fevers, intermittent and remittent, prevail from September to the middle of December, the worst month being generally October, during which month very few escape one or more attacks of either one or the other form of it; they are not severe in their nature, but when once attacked by either, repeated relapses are frequent; this in the end leads to sequelæ in the shape of dysentery, bronchitis, pneumonia, and enormous spleens, thus often causing death indirectly. Skin and eye diseases prevail throughout the hot season; they are due to heat and the careless and dirty habits of the people. Next to fevers, these are the most common diseases of the district. Bronchitis and pneumonia prevail from November to April; they are very severe and fatal, and, I believe, are more frequent in this district than in any other in the Punjab. The causes appear to be the great range of temperature during the cold months, the want of proper clothing, and the generally impaired state of the constitution of the people from previous repeated attacks of fever. I believe that a very great proportion of the deaths during the cold months is due to these two diseases, though fever is generally stated to be the cause. Ulcers are very common throughout the year; they are usually very large and sloughing, and difficult to cure, and often originate from a very trivial cause, such as prick, scratch, pimple, or sting of an insect; people with enlarged spleens being particularly liable to them. Enormous spleens, the sequel to repeated attacks of ague, are met with everywhere, especially amidst the Kirárs and poorer classes. Eventually this disease is indirectly the cause of much mortality in the district. Dysentery and diarrhœa are not common, and cholera is almost unknown. Small-pox is occasionally very prevalent during the spring, and measles more so. Stone and goitre are often met with. Europeans, as a rule, enjoy very good health in the district."

Plague.

The district has so far escaped the ravages of plauge. Imported cases of plague have occurred from time to time in different parts of the district. But so far there have not been many indiginous cases nor has there been a regular outbreak within the district.

Measures taken to prevent fevers, &c.

No special measures have been taken to keep off plague, and it is not possible under the circumstances of the district to do much by way of eradicating malaria. The depressions adjoining towns caused by the digging of earth for building purposes, etc., are filled up as far as possible in order to prevent the formation of cess-pools in the vicinity of the towns.

Infant mortality.

Female infanticide is unknown in this district. Indeed, owing to paucity of females, a girl is looked upon as valuable property. The death rate of infants under one year of age is, however, larger here than the provincial averages, the figures of 1901 and 1902 being (infants) 32 and 31 per cent. for the district against the provincial average of 25 and 24 per cent. respectively. More male infants die than female infants. This is

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only natural with reference to the large number of males born. The causes of the high infant mortality apparently are insufficient clothing in winter and rapid variations of temperature in the autumn.

Birth ceremonies.

The ceremonies observed by the majority of the Muhammadan population are described below.

Muhammadan ceremonies.

No particular rites are observed on the birth of a girl. When a boy is born, a knife is buried upright in the ground near the head of the mat on which the mother lies (women are delivered lying on a mat on the ground, never on a bed). The knife is to keep away *jins*. The village *mullán* is sent for, and in the child's right ear repeats the call to prayer, and in the left *Allahu akbar*. Alms and food are distributed. Before the child is allowed to suck, a small quantity of sugar is placed in its mouth by a person of the family who is of well-known good character and disposition. Biloches squeeze the liquor from asses' dung into the child's mouth, which is supposed to make it firm in battle. This administration is called *ghutti*. On the first, or at latest on the third day after birth, the child is named, after consultation with the *pir* and *mullán*. Between the seventh and twenty-first, one or two goats are killed. The head, feet, entrails and bones are packed into the skin and buried. The flesh is cooked and divided among relations and the poor. The name of this ceremony is *akíka*.

Hair cutti.

The next ceremony in a child's life is the solemn cutting of its hair. A child's first hair is called *jhand*, and the act of cutting the hair off is *jhand laháwan*. Every child has its *jhand* cut off at the door of the village mosque. This is called *vadían di jhand laháwan*, "to cut off the hair according to ancestral custom." This ceremony is an occasion for a gathering of friends, and for a feast. But, before the child was born, the parents have made vows to more than one saint to cut off the child's hair at his shrine. Successive growths of the child's hair are accordingly cut off at the shrine of each saint to whom the parents have vowed. This votal cutting of the hair is called *manaut di jhand laháwan*.

Circumcision.

From three months to ten years boys are circumcised. No particular age is fixed, but it is thought well to get the ceremony over soon, because boys are less liable to attacks of *jins* after it has been performed. Among the rich, much money is spent, and the rite is performed with as much display as a marriage. It is called the small marriage. Taking a wife is the big marriage. The operator is always a Pirháín, a caste who live by this industry. They are so named because the Prophet gave his coat, *pairahan*, to Sheikh Núr, one of their ancestors, as a reward for circumcising a convert after a barber had refused. Since then this service is not performed by barbers. The local name for circumcision is *tahor*, said to be derived from '*tahúr*' which means purifying, in Arabic.

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Hindu ceremonies.

At the birth of a child among the Hindus the Bráhman is summoned or referred to and a name is given to the child with his advice. The Bráhman is paid, and if the baby is a boy alms are distributed. A knife, sickle or other iron instrument is placed under the head of the mat on which the woman is delivered. This is done to keep off evil spirits. A pitcher is filled with water and kept in the room with a knife or piece of iron in it. The woman may not drink water except from the pitcher.

When the new-born is a boy a *thali* bronze plate is held up and struck with the hand or some wooden stick and sounded like a gong, in order, it is supposed, to remove the child's fear of sounds, and make him plucky. The child is bathed directly after birth, and is bathed regularly every day. *Ghutti* consisting usually of *gur* (sugar) and *sáunf* (aniseed) is administered to the baby before he is allowed to suck for the first time. The object is to clear up his inside. The woman bathes on the fourth day and removes to a charpoy, the knife, etc., being still kept under her pillow. On the sixth evening after birth, a *bandi* (account book) is kept near the baby's head with a pen and inkpot, and a bow and arrow, and also a sword if possible, are kept handy to enable the goddess of fortune (Bidmátá) to write down the new-born's fortune at night. The name, date and time of birth are noted on the account book (*bandi*) the next day. This ceremony is called *satthi* and is usually performed in presence of the brotherhood who are either fed or presented with dates and sugar. The woman bathes again on the 7th day and a third time on the 13th day, when the confinement is over, and she can go out without taking any precautions against evil influences. The baby is kept wrapped in a loose piece of cloth until the 13th or 27th day when he is clothed in a *kurta* (jacket). Some boiled wheat (*ghunganis*) is distributed at the time. For thirteen days the family are supposed to be in a state of impurity (*sutak*) and do not eat and drink with others.

Other general birth customs.

The following is an extract from the old Gazetteer :—

The Deputy Commissioner writes :—"There is one peculiar custom, which I am told is almost universal, of moulding the heads of new-born children by means of an earthenware cup, so as to produce a broad open forehead. This custom prevails, I believe, in Afghánistán and Multán, but is certainly unknown in the Punjab proper. The Civil Surgeon assures me it is very efficacious and does not appear to injure the brain, though it certainly does produce the round bullet head associated in European minds with a meagre intellectual development."

It is considered the first duty of a mother to shape the head of her child. In addition to pressing the forehead with an earthen cup the mother keeps pressing it with the palm of her hand whenever she is suckling the baby. If the head is not shaped well in this manner, the child is called *múla, dhasira* (having 2½ heads), or *satsira* (having seven heads). It is considered a mark of beauty

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Other general birth customs.

that there should be a pit in the chin. This is made artificially by frequently pressing the centre of the chin of a baby with one end of a *surmachu*. An eagle nose is considered very beautiful, the nose of the infants is accordingly pulled and moulded.

The mother is also expected to shape the limbs and body of the infant. This is done by a process called *bandhna* or *baddhan*, a sheet of cloth is wrapped round the infant, so that his arms should be stretched alongside of his body and his legs straight; a strip of cloth is then tied round the extremeties somewhat like the figure of 8 with a knot in the middle. The head is kept erect. This practice is supposed to keep the body in shape.

Sex.

The number of males and females in every 10,000 of both sexes is shown below :—

		Males.	Females.
1881	All religions	5,449	4,551
1891		5,430	4,570
1901		5,428	4,572
1901	Hindus	5,470	4,530
	Muhammadans	5,423	4,577

The proportion of males is larger than that of females which is the natural consequence of the large birth-rate and smaller death-rate of the male sex already noticed. The comparatively small death-rate of the males is probably due to the active life which gives them more exercise in the open air than the females. The ratio is about the same among Hindus and Muhammadans, and has not varied at the last three censuses.

The proportion of children under five years is, however, somewhat larger among the Hindus than among the Muhammadans, due obviously to the greater care taken by the Hindus of their female children. The table below shows the number of females to every 1,000 males under five years of age :—

Year of life.	All religions.	Hindus.	Muhammadans.
Under 1 year	951	1,052	951
1 and under 2	1,038	958	1,045
2 " " 3	886	904	884
3 " " 4	961	1,003	953
4 " " 5	926	981	920
Total under 5	947	984	941

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Table 10 shows the number of single, married and widowed persons by religions, at different ages. The totals are given below:—

	TOTAL.			HINDUS.			MUHAMMADANS.		
	Single.	Married.	Widowed.	Single.	Married.	Widowed.	Single.	Married.	Widowed.
Persons... ...	203,128	167,166	35,362	24,462	21,280	6,479	176,996	144,552	28,629
Males	124,544	82,406	13,257	15,638	10,828	2,097	107,922	70,901	11,080
Females ...	78,584	84,760	22,105	8,824	10,452	4,382	69,074	73,651	17,549

Both among Hindus and Muhammadans the number of unmarried males is much larger than that of married men. On the other hand, the unmarried females number nearly half of married and widowed ones. The majority of the unmarried females are under 15 years among Hindus and under 20 among Muhammadans. With solitary exceptions every girl gets married sooner or later. But there are several men who cannot afford to get married and have to lead a bachelor life to the end.

Marriage ceremonies. Betrothal.

Betrothal is a contract generally between the parents or guardians of the boy and the girl. The perpetual tutelage of women is strongly asserted in this district, and so at no age can a woman enter into a contract regarding her own marriage. A grown up male, however, does sometimes enter into the contract personally, if he has no guardians or relations who can act for him. Among the Musalmáns, if a contract of betrothal be annulled at the request of the girl's guardians they must return the clothes and ornaments presented to the girl at the time of betrothal, and also pay up any other expenses which the boy's side may have incurred at the time of the betrothal. If, on the contrary, the boy's guardians move to have the contract set aside, they cannot recover the clothes, etc., presented to the girl, but are not liable for any damages. Cases of breach of contract of marriage are thus treated from a purely business point of view. The boy's side spend money on the ceremony and are entitled to recover it if the other side fail to abide by the contract. On the other hand, the girl's side spend no money on the ceremony and can claim none. It is a very fair commercial transaction that the girl's parents should refuse to return the presents made to the girl when they do not refuse to give her away in accordance with the contract. Among the Hindús no money is spent on the betrothal ceremony

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except in cases of marriage on payment of money, where the money paid must be refunded by the girl's guardians, if they refuse to abide by the contract and the boy's side are not entitled to recover the money if they refuse to do so. In cases of *wattá sattá* (exchange) marriage, the annulment of one betrothal annuls all other contracts dependent on it. The custom of accepting consideration for the gift of a girl prevails very largely in this district. Among the Kirárs it is the general rule either to take money or to take a girl into the family in return for a girl given into another family. Cases of Dharm Nata, where no consideration is accepted, are confined to the more prosperous classes. Among the Musalmáns, cases of acceptance of cash are rare, but among the poorer classes the girl's guardians, no doubt, consider that by making a gift of a girl they lay the other side under a deep obligation and generally expect some sort of recognition thereof either in the form of a counter betrothal (in exchange) or direct benefit in some other way.

With slight differences the formalities observed among the Musalmáns are these :—

The boy's father or guardian sends some relative or friend to the girl's father or guardian to get his consent. The boy's father and relatives then go to the house of the girl and take a suit of clothes and some ornaments (if possible) for the girl, with some sweets (sometimes dried fruit as well). They are met by the father and relatives of the girl. The clothes and ornaments are made over to the girl who wears them. Some of the sweets are distributed and a formal blessing (*dua kher*) is prayed. In token of acceptance of the request the girl's father or guardian gives a *lungí*, *reta* (red piece of cloth), *pachvera* or ring for the boy and some of the sweets are returned. These sweets are distributed by the boy's relatives when they get back to the boy's house. The betrothal is then complete. Among the Jats the boy accompanies the party to the girl's house.

The contract is revocable any time before the *nikáh* (marriage). A contract of betrothal can be revoked without any objection or liability for damages so long as the formal visit to the girl's house has not been made and the clothes and ornaments have not been given to the girl. After this formality, if the boy's side refuse to abide by the contract, they lose the clothes and ornaments presented to the girl, but are not liable to pay any damages. But if the girl's side revoke the contract, they must return the clothes and ornaments received by the girl and also pay such expenses as may have been incurred by the boy's side on the betrothal ceremonies, or such damages as may be deemed necessary in consequence of disgrace suffered by them.

NOTE.—In respectable families a contract of betrothal is sometimes made merely by a message from the boy's father or guardian and an acceptance from that of the girl. No formalities are observed. There are slight differences between the different tribes and also

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within the same tribe as to the articles taken to the girl's house and those given by the girl's parents for the boy. In some cases the boy's friends distribute sweets at the girl's house on the first informal request being accepted; in others the girl's parents give sweets to the messengers. No scale is fixed as to the value of the articles to be given by each side. The essential parts of the ceremony are the formal visits by relations and friends of the boy to the girl's house with a suit of clothes and some ornaments which are made over to the girl, the gift of a piece of cloth or ring by the girl's parents to the boy and the formal prayer of blessing (*dua kher*).

There are three classes of betrothal among the Hindús :—

(1) the *dharm* betrothal, where no consideration is taken in return for the gift of a girl ;

(2) *wattá sattá*, where a girl is promised in return for a girl promised to be married into the family ; and

(3) on payment of money (*takké*) where a cash payment is made in return for the gift of a girl.

In each case the first preliminary is a request for betrothal by the father or guardian of the boy to the father or guardian of the girl. When the father or guardian of the girl gives his consent and when it has been settled under which of the above mentioned classes the contract will fall, the following further formalities are observed.

CLASS I.—*Dharm* betrothal.

A number of relatives of the boy go to the house of the girl (taking nothing with them). The girl's father or guardian meets them with his relatives and gives them some *gur*, fruit (fresh or dried) or dates, and the *Bráhman*, if present, does *Ganesh Sthapan* (worships the God *Ganesh*) and reads *Gotráchár*. The *gur* and fruits are taken by the boy's relatives to the boy's house and distributed there. (In Tahsil Sinawan it is also customary to give from 1 Re. to Rs. 7 to the boy's relatives along with *gur* or fruits. In some cases the relatives are not collected at the occasion and no *gur* or fruits are given by the girl's guardian. Such cases are, however, rare.)

CLASS II.—*Wattá Sattá.*

There are three kinds of *Wattá Sattá.*

(*a*). *Amho Samhaná*, where each party betroths his girl to a boy in the other party's family.

(*b*). *Trebhanj*, where three betrothals are made in connection with one another.

(*c*). *Chobhanj*, where four betrothals are made in connection with one another.

In this class of betrothal (*i. e.*, *Wattá Sattá*) all the parties concerned meet at one place by appointment and enter into the contract of giving the girls, one to the other, after which each girl's guardian gives *gur* or fruits to the guardian of the boy to whom his girl is betrothed.

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The Bráhman, if present, does the *Ganesh Sthapan* and reads *Gotráchár*. The *gur* or fruits are taken home and distributed.

CLASS III.—On payment of money (*takké*).

The first thing done is to settle the amount of money which has to be paid. Some people consider it objectionable to give publicity to the payment of money, others do not mind it. In the first case the formalities observed in case of the *Dharm* betrothal are gone through and no mention is made in the brotherhood of the payment of money. In some cases where the parties have not enough mutual confidence, mention is made of the payment in the assemblage. Where publicity of the payment is not considered objectionable, the guardian of the boy goes to the house of the girl with a few relations and trustworthy friends of his own. The girl's guardian names the amount which is generally paid in two instalments, ((1) at the time of betrothal and (2) at the time of marriage to meet the expenses.) The first instalment is paid at the time and *gur* and fruits are given by the daughter's guardian to the boy's father and relatives. *Gotráchár* is read by the *Bráhman*.

After the above formalities a betrothal is considered complete and binding. A betrothal cannot be revoked after it has been completed in the above manner unless the conditions on which the contract is made (in Classes II and III) are not fulfilled.

Restriction as to marriage.

Among the Musalmáns a marriage is allowed with any relation outside the limits of consanguinity prohibited by Muhammadan Law, and, as a rule, it is considered preferable to marry within one's own tribe and much more within one's own clan. There are several instances of marriage between members of different tribes, but such connections are looked upon with disfavour and are not made except for some necessity. It is very common for a man to give his daughter in marriage to his brother's or sister's son. This practice is a safeguard against the property passing out of the family. Among the Hindús, however, a person cannot marry within his own *zát* (clan), so that a man cannot marry a woman who is an agnate of his, nor, on the other hand, can a woman marry an agnate of her father. Any relation of a man through his sister, mother, wife or daughter must therefore belong to a different clan. A man is not supposed to marry outside his tribe or caste, but cases are not uncommon where men of higher caste have married women of lower caste. The practice is very common among the Kirárs (Arorás) to marry *marechi* women from Marwar (who are Sudras) and are actually purchased for money. The practice has received some check of late owing to a number of prosecutions. There is no restriction as to the age at which a marriage can be considered valid.

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The only binding ceremony which completes the marriage among the Musalmáns is the *nikáh*, performed with all the formalities of Muhammadan Law. The chief formalities are the asking of the consent of parties (*ijáb kabúl*) before two witnesses and the fixing of the dower. The other ceremonies connected with a marriage (*vivah*) are not indispensable. The usual procedure at a wedding is as follows : The marriage procession (consisting of the bridegroom, his relatives male and female, and friends) reaches the bride's house some time in the evening. The *nikáh* takes place at night (and sometimes on the following morning) after which the bride is dressed in a suit of clothes presented by the bridegroom's guardian and the bridegroom in a suit presented by the bride's guardian. *Til* and sugar are then distributed. The procession returns in the morning with the bride.

As regard the Hindús, the forms of marriage prescribed by Hindu Law are not known. The ceremonies observed at a marriage are these. The marriage procession (consisting of the bridegroom, his relatives and friends, and one female relative of the bridegroom, generally his sister), reaches the bride's house early in the evening. In the way the bridegroom cuts a twig of *jandi* (*prosopis specigera*) and if there is no *jandi* (*kanda*) tree near the way a *jandi* twig is brought and fixed in the way to be cut by the bridegroom. On arrival of the marriage procession, the first ceremony performed is that called *Pish Kára*, which consists of an exchange of courtesies between the bridegroom and bride's father or guardian, each anointing the forehead of the other with paint (*tilak*). The bride (*kuwár*) and bridegroom (*ghot*) are then seated on *khárás* (baskets placed upside down) in the *bedi* (a small canopy prepared for the occasion) and a ball of kneaded flour is placed between them; the bride and bridegroom join their right hands and the *Bráhmans*, who are seated around the *bedi*, read the *paddhati* (ritual). This ceremony is called *hathleva*. The *kanya dán* next takes place, the bride's father or guardian making a gift of the girl to the bridegroom by taking a handful of water. The *láwán* ceremony is then performed, the pair with their dresses tied together circumambulating the *havan* (sacrificial) fire three times. The bride then changes her dress and food is served to the guests; after which the marriage procession returns with the bride, the female relative of the bridegroom who came with the procession accompanying her back to the bridegroom's house.

The principal ceremonies are the *kanya dán* and *láwán*.

The following account of marriage ceremonies given in the old Gazetteer is interesting :—

"Marriages are arranged on two principles. An exchange of brides is effected, this is called *watta*, or money is paid for a bride. Money marriages are called *allah námi* marriages, but, as the people themselves admit, the name is a fiction. A few persons do not receive money for girls. They are not looked on with commendation, but are ridiculed, as parting with

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a valuable property without receiving an equivalent. There are no forms of betrothal. The relations manage the matter without the intervention of go-betweens, such as *nái* or *mirási*. From reading the accounts given by residents of this district, it would seem as difficult, to arrange an engagement as to make a treaty. There is a capital account given of the conferences in the vernacular Settlement Report by Kází Ghulám Murtazá, Extra Assistant Settlement Officer. Even after everything is settled, the mothers of the parties meet, and have a long talk in which they pretend to be personally anxious for the marriage, but put forward every obstacle that can be imagined. These are gradually explained away, until the aversion of their husbands to the match alone remains. After discussing the obstinacy and perverseness of the husbands, one gives the sign of giving way by saying, "Well, I suppose we must put compulsion on these stupid men." After that, all hindrances disappear like smoke. All the conversation at these mothers' meetings is as well known beforehand as the questions and answers of a catechism. When the engagement has been settled, the bridegroom's friends take the following clothes to the bride :—

A sheet—*bhochhan* or *chunní*.

A *chola*.

A petticoat.

Custom varies as to whether the bridegroom should accompany these presents.

The following ornaments are also given :—

A pair of *kangans* or bracelets.

A *hassí*, a solid necklace.

A *mundrí* or ring, with a *patthi* or sort of shield on it.

The *kangans* and *hassí* are not given by poor people, but the *mundrí* and *patthí* are *de rigueur*, and in the opinion of the women no betrothal is complete unless the *mundrí* and *patthí* are given. The account of how the bridegroom's family are mulcted is very amusingly given in the vernacular Settlement Report, but is too long to be repeated here. To get a bride by an *Allah-námí* marriage cannot cost the bridegroom less than from Rs. 70 to Rs. 100 at the very least. The actual ceremonies of marriage consist of two parts : (1) the *nikáh*, or wedding ceremony according to the Muhammadan ritual; (2) the ceremonies which are not connected with the religious rite. These last are all known by the general name of *sagan* and are very interesting; some are directly borrowed from the Hindu ritual. In others, remnants of the time when marriage by capture prevailed can distinctly be traced. Others are connected with the personal adornment of the bride and bridegroom. A marriage consisting of the bare *nikáh* and without any of the usual ceremonies is called a *dhangera*, which means a kicking-strap tied on a cow while milking. The term is sufficiently expressive. A few days before the marriage the plaits of the bride's hair are solemnly opened by the most honoured women of both families. Her body is rubbed with *chikun*, a mixture of turmeric, barley flour, and sweet oil, to increase her personal beauty. With the same object she is bled. The bride is furnished with an iron knife, and she is never allowed to be unaccompanied by a female friend. Similarly, for two days before the wedding and during the wedding, the bridegroom is armed with a knife or sword, and a friend of the same age as the bridegroom is appointed to accompany

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him day and night. This companion is called *sabálá* or *ánhar*. This custom is evidently a relic of marriage by capture, the bride's arms and companion being intended for defence, and those of the bridegroom for agression. On the day fixed for the marriage, the bridegroom's party, called *janj*, proceeds to the bride's house. The *nikáh* is read by the *mullán*. New clothes are then sent by the bride to the bridegroom and by the bridegroom to the bride. Then the bridegroom, taking a pillow under his arm and accompanied by his *ánhar*, proceeds to the bride's house. On the threshold is an inverted *chhúní* or lid of a *ghará*, underneath which is a rupee, 8-anna or 4-anna piece. Before entering, the bridegroom stamps on the *chhúní* with his foot. If he fails to break it he gets well laughed at by the women. The potter and, among Magassí Biloches, the barber, appropriates the coin. The breaking of the *chhúní* represents the demolition of the last defences of the bride's party. After the bridegroom has entered, the bride still offers a show of resistance. The bridegroom first lifts her by force from the seat on which she is, to another. Then she presents her closed fist to him, in which is a lump of *gur*. This, after pretended struggles, he forces from her, and the bridegroom's victory is complete. Then follows the *sir-mel*, or joining of heads, which represents the consummation of the marriage, though this does not actually occur until the bride reaches the bridegroom's house. The *sir-mel* is usually performed simply by the chief women of the bridegroom's family holding the heads of the bride and bridegroom together. Among persons of position the *sir-mel* is effected as follows :—The *ánhar* leads the bridegroom to the spot where the bride is sitting with her hands over her face and a *Kurán* before her. The bride's companions give the bridegroom leave to uncover the bride's face. He does so. The bride's glance should first fall on the *Kurán*, then on her husband. Then follow a number of ceremonies, most of which are taken from the Hindu ritual, and some of which point to abundance and increase. The bride and bridegroom are seated on a basket. Their clothes are knotted together, and the *mirásin* places the knot seven times on the head of each, while she sings the verses appointed for the occasion. This ceremony is called *lánwán*. Then the *mirásin* places a flock of cotton on the bride's head. The bridegroom blows it away seven times. This is called *phul chunan*. Then the bridegroom holds his hands open and joined together with the palms upward. His hands are filled with flour, *til* or salt. Underneath his hands are placed the hands of the bride. He allows the flour or salt to run from his hands into the bride's. Then the bride runs it into his hands. This is done seven times, and is called *til vetre*. By this time the night is well advanced and the bridegroom's party return home, taking the bride and a female friend. Sometimes the bridegroom's party do not return home till the next day. The bride remains seven days in her husband's house. These seven days are called *sattovará*. After this she returns to her parent's house for a time.

It may be asked which of the ceremonies described, would, if proved to have occurred, be conculsive evidence of the often disputed fact of a betrothal and of a marriage willingly made by the bride. Of course every part of the ceremonies would be corroborative evidence, but if it was proved that a woman received her *patthí* and *mundrí*, the betrothal may be admitted to be complete, and if the *sir-mel* be proved to have taken place, the marriage may be accepted as an accomplished fact. More weight is really attached to the *sir-mel* than to the *nikáh*, which is generally done most perfunctorily as far as the woman's consent is involved. *Dhangera* or 'kicking-strap marriage' if denied by the bride, should be looked on with the greatest suspicion by a Civil Court."

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Child marriage.

A marriage ordinarily takes place when the parties have attained the age of puberty. The girl is usually between 12 and 16 years and the boy between 15 and 20. Cases of marriages taking place much earlier are howexer not rare. The Musalmáns do not ordinarily give a girl away in marriage before she is 12, and the Hindús do not till she is 7 years old. But figures in table 10 show that among both Musalmáns and Hindús there are a number of cases in which children under 5 years of age are married. These child marriages generally take place in well-to-do families. In such cases, however, marriage is not consummated till the parties have grown up.

Polygamy.

A Musalmán is allowed to marry four wives, all alive at one time, and there is no limit to the number of wives a Hindu may have. It is, however, usual for a man to have only one wife at a time. Among the Musalmáns the richer people almost invariably have more wives than one, and they very often go up to the full prescribed limit. In some cases even that limit is exceeded. A poor man, however, does not marry a second time during the lifetime of the first wife unless she has not borne him a son or he has to provide for his deceased brother's wife and rarely in case of serious quarrel. The custom of Labana Sikhs is similar to the ordinary Musalmáns. Among the Hindús, a man marries a second time only if the first wife has not been lucky enough to bear him a son, or, if there is unevenness between the husband and wife or their guardians. When a Hindu takes a second wife, he generally sets a house apart for the first wife who lives practically in seclusion, getting a maintenance from her husband.

Divorce.

Divorce is as a rule peculiar to the Musalmáns. The term is not known among the Hindús. Cases of divorce are rare even among the Musalmáns, and such of them as do occur are generally confined to the lower classes. Under the Muhammadan Law, which is followed in this respect, a wife may be divorced for bad character, disobedience or blasphemy. A husband may divorce his wife without assigning any cause, and such cases are known to have occurred. A change in the wife's religion does not dissolve marriage, but the wife may insist on a divorce, if the husband changes his religion.

A divorce is performed by the husband addressing his wife in the presence of two witnesses and saying "I divorce you." If this is said once or twice, the woman can be re-married to her former husband. But if it is repeated three times the divorce becomes irrevocable. She cannot then remarry the former husband unless she has married and been divorced by another man.

The term *khala* is not known. *Lunda* is the name of the divorce in which the wife obliges the husband to give her up. She relinquishes her right to dower and sometimes pays a sum to the husband in consideration for his agreeing to divorce her.

NOTE.—The form of divorce called *Lunda* is usually adopted when a woman wishes to give up her husband and marry some one else. Instances have been quoted of Rs. 40, Rs. 50 or an acre of land being given as *Lunda* to the husband.

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Widow marriage.

Widow marriage is authorized by Muhammadan Law and is common among the Musalmáns. It is celebrated by the reading of *nikáh*. The *vivah* ceremonies are omitted. The custom is not recognized by the Hindús except Labana Sikhs who call it *karewa*.

Karewa.

On the death of a husband his widow usually marries his brother, if any. If there is no brother of her deceased husband, she can marry some one else in the brotherhood. This is called *karewa* or *chadar dálna*. The ceremony consists of the man and the widow being seated in one place and a cloth sheet belonging to the man being put over them. *Ardas* (prayer) is read and *ghunghanis* (boiled grain and sugar) are distributed. The difference between *karewa* and a first marriage is that in the latter the Brahmans are invited and religious rites are performed by them in the *bedi*, while no such thing is done in the former case.

Polyandry.

Polyandry is not permitted by any tribe in the district.

Intermarriages.

A man belonging to a high caste will generally not give his daughter in marriage into a lower caste. Barring Sayyads the Biloches consider themselves to be the highest caste in the district. A Biloch will take a wife from among Kureshís, Patháns and Jats, but will prefer to give his daughter only to a Biloch. Giving a daughter to a Sayad, Pathan or Kureshi is allowed, but only in cases of extreme necessity is a Biloch girl married to a Jat. Rind, Hot, Gurmani, Jatoi, Laghari and Drishak Biloches strongly object to give their daughters in marriage to Jats. Patháns consider themselves to be as good as any one else and would not give their daughters in marriage to Jats. Jats are considered the lowest of the main tribes and will intermarry with any other tribe. Sayads do not, as a rule, give their daughters to others than Sayyads or Kureshís.

Among the Hindús a woman loses her *got* on marriage and acquires that of her husband. The same custom exists among Muhammadans, but a wife coming from a higher caste or sometimes even from a lower caste is called by her original caste, thus Patháni, Sayyadáni, Sheikháni or Jatti. For instance, if a man has three wives one having come from a Biloch family, another from a Jat family and the third was the daughter of a Sheikh, people will, when talking of the wives of this man, refer to them as his Jatti wife or Sheikháni wife. This is, however, for convenience of reference, and she is not supposed to retain her own *got*. Her offspring also belongs to the caste or *got* of her husband.

Traffic in women.

Women are brought into the district from Jammu, Marwar, Amritsar, Lahore, Jullundur and Gurdáspur, either by their own relations or by bad characters. They are supposed to be Hindús and are bought by Kirárs of the district who cannot find wives in their own brotherhood. Sometimes the women turn out to be Muhammadans. Hitherto the Kirárs did not consider it an

offence to buy a woman and used to make no secret of it, but some of the cases having been hauled up to Court, the practice is dying out. No special ceremonies are observed at these marriages. Sometimes the ordinary marriage ceremonies are quietly gone through and on other occasions no ceremony whatever takes place.

Inheritance through the mother.

The custom as regards the devolution of property on daughters and sisters may be summarized thus. Among the Hindús, a daughter or sister succeeds to property only if there is no agnate male within seven generations: Among the Muhammadans ordinarily a daughter does not succeed to property as long as there are any sons or widows. Among the Patháns, however, daughters have been given a share of the property along with the sons. The Biloches of Alipur say that daughters are excluded by the male lineal descendants of the deceased only within three generations. In the absence of lineal male descendants through males, the daughters inherit before the near male kindred, including brothers according to some, while others say that they are excluded by brothers or their descendants. The Jats have quoted instances in which daughters have excluded the collaterals of the deceased, or *vice versâ*; or have shared the property half-and-half with the collaterals. Sisters come after the daughters. An unmarried daughter gets maintenance out of her father's property till her marriage. After marriage a daughter has no lien on her father's property unless she inherits it in the above-mentioned manner, when her marriage is no bar to her succession. When a woman inherits the property of her father or brother in the manner above described, her descendants succeed to it after her.

Female infanticide.

Female infanticide is unknown in this district.

Language.

The language spoken by the bulk of the population is Jatki, which is also spoken in Multán, Baháwalpur, Dera Ghází Khán, and the south of Miánwáli and Jhang. It is called by the people Hindí and Hindkí, and in the Bilochi-speaking parts of Dera Ghází Khán, is known as Jagdalí. It has been named Multáni by Europeans, but no native knows it by this name. It resembles Punjábi and Sindhí, and differs from both in many particulars. The case-endings agree partly with Sindhí and partly with Punjábi, while some are peculiar to it. It resembles Sindhí, Pashto and Persian by using an intricate system of pronominal suffixes from which the sister dialects of India are happily free. The inflections of the verb are peculiar and differ both from Sindhí and Punjábi. Multání excels the Indian dialects, and resembles Sindhí in having a passive voice instead of being reduced to the clumsy compound with *jána*, to go. *Maríndán*, I am being beaten, is much handier than the Hindustání, *máin márá játá hún.* Multání is a pure Sanskritical language. It contains many Sindhí and Punjábi words, and has a copious vocabulary of its own. It has an abundance of grammatical forms which show that it is in

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an inferior state of development. Like all languages spoken by a rude people, Multání is extremely rich in concrete, and absolutely without abstract words. Mr. O'Brien published a *Multání glossary* which is a perfect mine of proverbial and other folk-lore. This book has been re-edited and re-arranged by Mr. J. Wilson, C.S.I., and P. Harikishan Kaul in a form more useful for reference, and a grammar of the dialect as spoken in Multán and Muzaffargarh, written by Mr. Wilson, has been added to it.

Literature.

There are no written books in Multání, but there is a large body of unwritten poetry, songs, proverbs, riddles and aphorisms which throw great light on the national customs and thought. Whenever Jats collect they spend a great part of the night in singing *dorhas*, or couplets. To be able to quote an appropriate proverb will send away a Jat laughing, although the moment before he has been vowing that he has just undergone all manner of violence, the least of which is robbery and murder. And a knowledge of their sayings and songs makes association with the Jats much more pleasant than it would otherwise be.

Caste.

Caste, as a religious institution, does not exist among the Musalmáns, all followers of the Prophet being treated as equal from a religious point of view. The word *zát*, which is the equivalent of caste, is, however, used to denote the clan; and within a clan strong social feelings and prejudices are known to exist. The institution of caste prevails among the Hindús. The Brahmans, the Khatris and the Arorás exist as separate castes. There are no Sudras to be found. The restrictions of caste are, however, much less stringent here than in the central or eastern districts of the Punjab.

Tribes.

With the exception of menials who are known by their respective professions and fresh converts to the Muhammadan religion who are known as Sheikh, the Musalmán population is divided into distinct bodies known as tribes (*kôm*), each supposed to be descended through males, from a common ancestor. The main tribes of the district are Jats, Biloches, Patháns, Sayads and Kureshis. Although intermarriage between the tribes is considered legal, yet marriages are generally confined within a tribe, and when an intermarriage takes place, the woman severs her connection with her tribe, so that the integrity of her husband's tribe is not affected. Among the Hindús the caste is in vulgar parlance called the *kôm* or tribe. For instance, a Hindu will state his *kôm* to be Arorá or Khatri in the same way as a Musalmán will profess to belong to the Jat or Biloch *kôm*.

Clan.

There are sub-divisions within each tribe known as *zát*. A Jat may be Hinjra, Angra, Khar, or the like. He will call himself a Jat, Hinjra, Angra or Khar. These are only narrower groups of agnates descended through males from a less remote ancestor. Among the Hindús, too, the sub-divisions of caste have

come to be known as *zát*. An Arorá, for instance, is Utradhi, Dahra or Dakhna, and then he may be a Nangpál, Kukreja, Manaktahlia, or the like. He will state his *zát* to be a Nangpál and his *kom* to be Arorá. It is very common to call a man as belonging to a particular clan, *e.g.*, Yár Muhammad Hinjra, Karímdád Mahra, Gahna Diwala, Hotu Nangpál, Asa Kukreja.

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Family.

A family known as *jhugga* or *ghar* is a group of agnates descended from a common ancestor within a few generations, who maintain their family ties in some tangible form. The *jhugga* includes the agnates descended through males only, all females going out of the family directly they are married into other families. The agnatic family is supposed to be the basis of the clans and tribes as they now stand.

Strength of tribes.

Statistics of the numerical strength of each tribe and its sub-divisions are given in Table XV. The total number of persons belonging (as ascertained at the last census) to the principal tribes is given below for facility of reference.

Name of tribe.	Population.	Percentage of total population.
Musalmáns—		
Jat (including Rájpút)	169,110	41
Biloch	76,586	19
Pathán	7,567	2
Sayyad	4,019	1
Kureshi	3,054	1
Hindús	55,446	14

Altogether the Musalmán tribes represent 86 per cent. of the total population. The Jats are the strongest and Biloches stronger than all the other tribes. The Hindús are mostly Arorá with a few Khatrís, Brahmans and Labánas. The percentage of total area owned by each tribe is—

	Per cent.
Jat (including Rájpút)	38·5
Biloch	17·4
Pathán	1·3
Sayyad	5·6
Kureshi	·1
Hindu	14·4
Others	4·9
Government	17·7
Total ...	100

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It would be unnecessary to attempt a description of each tribe. Many of them are found all over the Punjab and most of them in many districts; and their representatives in Muzaffargarh are distinguished by no local peculiarities. Some of the leading tribes and especially those who are important as landowners by position and influence are noticed briefly in the following paragraphs.

Distribution of tribes.

The Jats who own the largest amount of land are spread all over the district. The Rájpúts are confined to a cluster of villages at the extreme north of the Rangpur sub-*tahsil* of Muzaffargarh. The Biloches are quite strong in the Alipur *tahsil* being the main proprietors of 51 villages out of 177 (excluding Government *rakhs*), and own villages wholly or partly here and there in the other two *tahsils*. The Hindús who rank third in importance possess the greater part of 17 villages in Sináwan, 54 in Muzaffargarh and 15 in Alipur. These villages are scatterred all over the place. There is a group of Sayyad villages at the south of the Alipur *tahsil* and Sayyads also own lands in other *tahsils*. The Patháns have a strong settlement round about Muzaffargarh and own one village in the south of the Sináwan *tahsil* and another in the Alipur *tahsil*. Kureshís have a few villages in each *tahsil*.

Agricultural tribes.

The Musalmán tribes mentioned above have all been notified as agricultural under the Punjab Alienation of Land Act, *viz.*, Jat, Rájpút, Biloch, Pathán, Sayyad and Kureshi. Arains who are reckoned in this district as Jats have also been separately notified. Although the qualification Musalmán has not been given in the notification, yet that is what it comes to, as there are no Hindu Jats or Rájpúts in the district.

Jats and Rájpúts.

On the meaning of the word Jat in Muzaffargarh, Mr. O'Brien wrote as follows:—" In this district the word Jat includes that congeries of Muhammadan tribes which are not Sayyads, Biloches, Patháns and Kureshís. According to this definition, Jats would include Rájpúts. This, I believe, is correct. The Jats have always been recruited from the Rájpúts. There is not a Jat in the district who has any knowledge, real or fancied, of his ancestors that would not say that he was once a Rájpút. Certain Jat tribes as the Panwár, Parihár, Chhajra, Daha, Guráha, Bhatti, Massan, Bhutta, Sahu, Siál, Jángla, and others, have names and traditions which seem to connect them more closely with Hindustán. Some bear the Rájpút title of Rái, and others, as the Saigals and Kheras, though Muhammadans associate a Brahman with the *mullán* at marriage ceremonies, while the Panwárs, Parihárs, Bhattís, Joiyas, and others bear the names of well-known tribes of Rájpútána. The fact is that it is impossible to define between Jats and Musalmán Rájpúts. And the difficulty is rendered greater by the word Jat also meaning an agriculturist, irrespective of his race, and Jatakí agriculture. In conversation

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about agriculture I have been referred to a Sayyad *zaildár* with the remark—"Ask Anwar Shah; he is a better Jat than we are."

Jats and Rájpúts.

The Jat tribes are exceedingly numerous. There are 165 in the Sanánwán *tahsil* alone. They have no large divisions embracing several smaller divisions. Nor do they trace their origin to a common stock. No tribe is pre-eminent in birth or caste. Generally Jats marry into their own tribe, but they have no hesitation in marrying into other tribes. They give their daugters freely to Biloches in marriage. But the Biloches say that they do not give their daughters to Jats. This is, however, a Biloch story; many instances of Jats married to Bilochnís could be named. The best known Jat tribes are the following:—On the right bank of the Chenáb are settled the Khera Siáls who call themselves Rájpúts, with their branch the Surbánas, the Traggars, Thahíms, and Chhajras. In the Sanánwán *tahsil* are Parihárs, Panwárs, Guráhas and Pattals. In the centre of the district are, Metlas, Makwals, Bhuttas, Diwálas, Mahras, and near Kínjhir the Dhanotr and Jángla tribe abound. On the bank of the Indus, and in the south of the district, the Biloches become more numerous, and the majority of the Jats have a Sindhí origin shown by their bearing the title of Jám. Of these Sindhí Jats are the Dammar, Unnar and Sarkí tribes. The leading men among the Rájpúts are Mehr Allayar, Salem and Mehr Khanbeg of the Traggar tribe near Rangpur. The leading Jat families are those of M. Yár Muhammad Hinjra, Makhdúm Ghulám Kásim Makwal, M. Fatteh Muhammad Khar, Ghulám Muhammad Jángla, Ahmad Ali Diwála, Háfiz Muhammad Dammar, Jindwadda Panuha and Makhdúm Nur Muhammad Metla.

The Biloches.

The Biloches differ little from the Jats with whom they have freely intermarried and mixed, and with whom they live. The tribes are numerous, but have no arrangement into Tumans and Phallís like the Biloches on the frontier. No tribe is pre-eminent on account of descent. The only common bond is the name Biloch. In the south of the district, the distinctive Biloch dress of a smock-frock reaching to the heels and the long curly hair may occasionally be seen, especially among the Drishaks; but, as a rule, a Biloch cannot be distinguished from a Jat. In this district they cannot even boast that they excel in the standard Biloch virtues of hospitality, want of industry and robbery. Certain tribes, as the Surhánís, Ghazlánis, Gopángs, and Chándias, have the worst of characters, but they are no worse than the neighbouring Jats. None understand the Biloch language. Biloches are found generally throughout the district, but are more numerous on the bank of the Indus and in the south. Their chief tribes are the Chándias, the Gurmanís (among whom Mián Sheikh Ahmad, Honorary Magistrate, is the leading man), the Gopángs, the Jatoís (among whom Said Khan is the largest landowner), the Lagharis (Mír Hazar Khan being the principal man), Mastoís, and Drishaks (of whom Ali Muhammad Khan of Bhambri is an important man).

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Sayyads.

The Sayyads are chiefly Bukháris and Gíláníis. There are other less known divisions as the Husainí Maudúdí and Shamsí. Historically, the best known is the Saiyad family of the Makhdúm of Sítpur; and for sanctity that of Díwán Sultán Ahmad, the keeper of the shrine of Alampír at Shahr Sultán. Both these are Bukhári Saiyads. The Kahírís in the Sanánwán *tahsil* prefer to be Saiyads, and call themselves Sháh, but their claim is not generally admitted. They are very good cultivators, which gives a blow to their pretensions, for the Saiyads here are more noted for rapacity than industry. It should be mentioned here that the keepers of shrines, whether Saiyads, Kureshís or other tribes, are styled *makhdúm*.

Patháns.

The Patháns came to this district, as already described at the end of the last and beginning of this century. Their present representatives are of the Alezai, Bábar, Tarín, Bádozaí, Bamozaí and Yusufzaí tribes. The members of the family of Nawáb Foujdár Khan, C.S.I., and Nawáb Hasan Khan, C.S.I., of the Alezaí tribe, are *jágírdárs* and owners of Lálpur in Muzaffargarh *tahsil*, but they live at Dera Ismail Khan. The Bábars own most land. Their chief representative is Khan Bahadur Saifulla Khan, Honourary Extra Assistant Commissioner, Khángarh. The Taríns live in the Sanánwán *tahsil* at Khubáwar. The only Tarín of note is Háfiz Muhammad Khan. None of the other Patháns are remarkable.

The Kureshí families.

The Kureshís, though numerically small, deserve notice on account of their sanctity and present influence and wealth. The Kureshí family which now owns land near Karím Dád Kureshí and Gujrát, say that they received their lands from a king of Delhi. Their ancestors were counsellors and servants of the Dera Ghází Khán and Baháwalpur Nawábs and of Sáwan Mal. A Kureshí family owns Thatta Kureshí and the neighbourhood on the bank of Chenáb between Muzaffargarh and Khángarh, the principal man being Sheikh Ghaus Bakhsh. They own much land, and are well off. The Kureshís of Sheikh Umar in the Sanánwán *tahsil* are large landowners and rich. Their representative is Mián Kaura.

Jhabels, Kihals, Mors.

Of the other Muhammadan tribes, the only ones worth mentioning are the Jhabels, Kihals, Mors and Kutánas. The Jhabels came originally from Sindh, they cannot tell how long ago, but it is remarkable that of all the tribes of the district they alane speak pure Sindhí. They are also addressed by the honorific title of Jám. They live mainly by fishing and gathering *pabbans*, but many have taken to agriculture. They are reckoned good Muhammadans. The Kihals and Mors are said to be one tribe. In the north of the district they are called Mor, eat crocodiles and tortoises, and no Muhammadan will associate with them. In the south they do not eat these reptiles, and are considered good Muhammadans. Kihals and Mors live by fishing, but some have taken to agriculture. They, as well as the Jhabels, are fond of

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cultivating *samúka*, a grain that is sown in the mud left by the retreating rivers. These tribes live separately in villages near the rivers, called *mídní* from *me*, a fisherman. There is an old report in the Deputy Commissioner's office which says that these tribes were cannibals, but modern observation does not confirm this.

Kutánas.

The tribe Kutána are said to be Chúhrás converted to Islám. The derivation of the name Kutána is not known. In vernacular it is spelt Kurtána and pronounced Kutána. They live by cutting reeds and grass, and by making thatched roofs, ropes, reed huts, and other reed-work. On account of their willingness, Kutánas are sought after as servants, and become *chaukidárs*, village *kotwâls*, servants, and even cooks.

Hindu tribes.

Of the Hindús, the Kirárs are the most remarkable. They are Arorás by caste. They claim to have been Khshatris who became outcsstes during Pars Rám's persecution of the Khshatris. The ancestors of the present Kirárs fled to Kirát Prashtha. Kirárs are divided into three main tribes—Uttarádhí, Dakhana, and Dahra. The Uttarádhís and Dakhanas say that they were so named because they fled from Pars Rám to the north and south respectively. The origin of the name Dahra is not known. Each main tribe is divided into numerous sub-divisions the nomenclature of which defies classification. A few sub-divisions, such as the Máte and Goráwáre, are found in all the three main tribes. In Alipur the Malotra are found only in the Dakhana and Dahra tribes, and the Sachdev are found only in the Uttarádhi tribes. The Kantror is found only in the Uttarádhí. In this District there are more sub-divisions of Dakhanas than of the other tribes. The sub-divisions of each tribe intermarry, but the tribes do not intermarry. Uttarádhi Chaolas will not marry Dakhana Chaolas or Dahra Chaolas, and *vice versâ.* Almost the whole of the trade, money-lending, and banking is in the hands of Kirárs. They have no prejudice against any kind of work, and will sell vegetables or shoes, load donkeys, and do other work which an orthodox Hindú would refuse. They own plenty of land now and in some places the poorer Kirárs are regular agriculturists. Some individuals or families such as the Nangpals of Gurmani, Bajajes of Gujrat are considerable landowners. Amolak Rám, Bajáj, of Gujrat, is a *zaildár*. The Kirárs make very industrious cultivators. In correspondence and accounts they use a peculiar character called *Kirakki*. They are not popular among the people. And a proverb says:

Kàn, Kiràr, kutte dà, Visah na kije sutte dà.

"Don't trust a crow, a Kirár, or a dog even when he is asleep."

And a song is sung of their cowardice—

Chàr chor,
Churàsì assàn,

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Hindu tribes.

Hamla kita chor,
Drukiose assàn,
Lánát Choràn!
Shabas assàn!

The robbers were four,
And we eighty-four,
The robbers attacked,
We ran away,
Damn the robbers!
Well done we!

Still they have all the merit of thrift and industry, and in spite of the proverb are generally trusted by their Muhammadan neighbours. The earlier Muhammadan rulers seem to have behaved with toleration to the Kirárs. The Hindu revival led by Shámji, Lálji and Sánwal Sháh took place while the Gházi Kháns were rulers. Latterly, however, they were very badly treated. They were allowed to ride only on donkeys, and were obliged to wear caps instead of turbans under certain circumstances. Unmentionable indignities were inflicted on them. In documents they are described as *mutí-ul-Islám* or subject to Islám.

Labánas.

The Labánas settled here during the rule of the Sikhs, whose religion they still profess. Their chief occupation is rope-making. Some have become rich, and trade and lend money; a few have taken to agriculture and make industrious cultivators. At the Census of 1901 there were 1,189 Labánas in this district.

Brahmans.

The Brahmans are either Sársuts or Pushkarnas. They are in a state of insignificance, socially as well as religiously. Generally ignorant, few have even knowledge enough to perform a Brahman's ritualistic duties. In suits between Brahmans turning on Hindu law or Brahminical custom, they invariably call Kirár witnesses to give evidence on the law.

None of the other Hindu tribes call for any notice.

Primogeneture.

The rule of succession by a single heir, in each generation has been declared under the Descent of Jágír Act to apply to the *jágír* of Nawáb Rabnawáz Khan, Lieutenant-Colonel Muhammad Nawáz Khan, and Muhammad Sarfaráz Khan, in the village of Lalpura (*vide* Punjab Government notifications Nos. 81-A. to D., dated 13th May 1904.)

Religion.

Table XVI gives figures relating to religion. The distribution of every 10,000 of the population by religions according to the Census of 1901 is given below.

Hindús	1,287
Sikhs	79
Musalmáns	8,632
Christians	1

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Religion.

This is principally a Musalmán district, more than 86 per cent., of the population following the Muhammadan religion. Most of them are Sunnís. A few of the Sayyads and members of other tribes connected with them, however, belong to the Shia sect. Owing to the proponderance of the Sunnís, the Shias with a few exceptions make a secret of their views.

The agricultural classes and the village menials are almost entirely Musalmán, the Hindús and Sikhs belonging almost wholly to the mercantile classes, who, however, own much land, which the Arorás not unfrequently cultivate with their own hands.

Hindús.

The Hindús of the district, who are for the most part Arorás, and are commonly known as Kirárs, without regard to caste, worship the Krishna incarnation, or the river, or both, and their legends point to a revival of Hindúism having taken place in these parts between three and four hundred years ago by spiritual guides named Shámjí and Lálji being sent from Bindrában to bring back the Hindús who had begun to err and to worship at Muhammadan shrines. In *Sambat* 1600 came Shámjí from Bindrában. His *gurú* gave him two idols and said: "The Hindús of the western country of the Sindh are ignorant of their religion. They have no *gurú* to guide them between good and bad. Go to the west and teach the Hindús the ceremonies of their religion; make them your disciples (*sevak*). Your words will have speedy effect. Remain not in the pursuit of worldly affairs." When Shámjí reached the Sindh, he made two and-a-half disciples, *viz.*, two Khatrís and half a Chándia Biloch! He established a *mandar* at Dera Ghází Khán and there are now *mandars* of Shámjí at Dera Ismaíl Khán, Kot Sultán, Kot Addú, and Multán. Láljí was a worshipper of Krishna who sent him on an errand similar to Shámjí. He first declined to go. Krishna gave him an idol of himself and told him to start for the Indus, and that Láljí would know it was following by the tinkle of the *jhánjars* on the idol's feet. When Láljí reached the country west of Dera Ghází Khán he stopped and looked round. The idol said: "You have stopped, I am going no further." Láljí stopped and built a *mander* to Krishna by the name of Srí Gopínáthjí, which exists to this day. Other Láljí shrines are at Dera Ismail Khán called Srí Nágarjí, and at Baháwalpur called Srí Girdháríjí,

Sánwal Sháhi.

Another large body of sectaries are the Sánwal Sháhís. In *Sambat* 1545 Gurú Nának took a journey into the Sindh country and found the Kirárs ignorant of religion and without a *gurú*. He appointed a *gurú* to teach them. Sánwal Sháh was the name of Nának's servant, and the *gurús* that followed were called Nának Sháhí. The *gurús* of the Sánwal Sháh sect are called Sánwal Sháh potrás.

River worshippers.

The last sect of Kirárs are the worshippers of the river under the name of Jindpír. The Thakkar Kirárs are the *gurús* of the river worshippers. This worship is most prevalent in the Alípur

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tahsil. On Sundays the river worshippers go to a neighbouring canal or river to worship. They make a raft of reeds, place on it a *chirágh* made of flour which they light and allow to float away. It is a remarkable thing that the spiritual guides of these four sects have quite forced the Brahmans into the shade. In influence, wealth and intelligence the Shámjí dásí Gusáíns, the Láljí Gusáíns, the Sánwal Sháh Potrás and the Thakkars are far superior to the local Brahmans and receive much more respect.

The Arya Samáj.

A new sect of Hindúism, called the Arya Samáj, has been established lately, and has drawn a number of followers in towns particularly out of the educated clerical classes. The sect is unitarian and denounces all other sects of Hindúism and all the other religions.

The Jats, Biloches, Sayyads, Patháns, and the miscellaneous tribes profess to be Sunní Muhammadans. There are a few Shías, remnants of the time when the Kalhoras ruled in Dehra Ghází Khán and Mankera. The Sayyads and Patháns are the strictest Muhammadans, but even they are a good deal Hinduized. The Biloches and Jats are very lax Muhammadans. The names of *Allah* and Muhammad are always on their lips, and some know their prayers and fast strictly. But their feelings of worship are entirely diverted from the Divine Being to their *pírs*, for whom they have an excessive reverence. Every person has a *pír*. It is not necessary that a *pír* should be of known piety,—many, indeed, are notorious for their immorality. Nor is it essential that he should be learned. To obtain disciples all that is necessary is, that á *pír* should have a character of being able to procure the objects of his disciple's vows. A common way of choosing a *pír* is to write the names of the neighbouring *pírs* on scraps of paper, and to throw the scraps into water. The saint whose scrap sinks first is selected. This mode of selection is called *chithián ghatáwan.* Each person secures the intercession of his *pír* by an annual offering called *buhal*, which the *pír* goes round and collects himself or sends his deputies for. They demand their *buhal* in the most shameless way, and even carry off things by force. If the disciples are slow in giving, the *pírs* curse them, and pour filthy abuse on them. Besides this annual fee the *pírs* sell charms and amulets to obtain every object, and to avert every calamity, that can be imagined. It is no exaggeration to say that, with the large majority of the Muhammadan population, the *pírs* have taken the place of *Allah.* The marriage ceremonies are largely borrowed from the Hindu ritual, and among some tribes a Brahman as well as a *mullán* is in attendance. At harvests, the first charges on the crop are the fees of the *mullán*, called *rasúl arwáhi*, and those of the Brahman called *ganesh.* Jats declare that they are ruled by the *Shara Muhammadí*, but they grudgingly allow a widow even a life tenure, and would give daughters no share at all in their fathers' estate. Pilgrimages to the shrines of saints are very common, and are made both as a religious duty and

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an amusement. Questions relating to marriage and divorce are governed absolutely by Muhammadan Law, but in matters of succession to property the *Shara* has not influenced the custom of inheritance based upon agnatic relationship. The validity of the marriage of woman to an agnate has, however, resulted in removing the disability of a married daughter to inherit in preference to distant agnates male.

Shrines.

The shrines of this district are very numerous, and the more important are frequented by pilgrims from Dera Ghází Khán, Multán and Baháwalpur. It will be sufficient to give an account of the most famous, and merely to name the others.

Daira Dín Panáh.

At the north-west corner of the district, in the town of the same name is the shrine of Dín Panáh. He was a Bukhari Sayyad who settled here three hundred years ago. He took up his abode in the house of Mussammat Suhagin, the wife of Akku, a Jat of the Makwal tribe. Mai Suhagin is said to have been a very ardent votary of the "*Kaba*" and wanted a living relic, *Lál* (son). Dín Panáh (a sage) went to *Kaba* and was handed over to her; and she was told that he would come to her when she got home. So it was; Dín Panáh is said to have come to Mai Suhagin as a baby crawling about on the bank of the Indus. With her husband's permissionshe began to suckle him and brought him up. When he grew up he gave away all Mussammat Suhagin's property in charity, and when the time of her daughter Mussammat Rabi's marriage came, there was nothing left to give, so Dín Panáh offered himself by way of dowry. Mussammat Rabi was married to a resident of Sanghar, where Dín Panáh went with her and lived the rest of his days. He is said to have been poisoned and died in A. H. 1012 on the west bank of the Indus where he was buried. The date of his death is obtained from the epitaph "*Khur-ba-Niqáb amadah*," by Abjad calculation. The Makwals of the east bank tried to steel his coffin, but where prevented. A feud broke out between the Makwals on each bank of the Indus. At last Dín Panáh revealed himself in a dream to the brothers of Akku, and told them to make a coffin for the east bank of the Indus, and that his corpse would be found in it also, as well as on the west bank. Since then there has been a shrine on each bank of the Indus. The tomb at Daira Dín Panáh is a fine domed building covered with blue and white tiles, some of which have been replaced at times and are fading away in colour. The inside of the *Maqbara* (shrine) is kept dirty. A little money spent on cleaning, plastering, and beautifying the inside would make all the difference in the world. The Makwals descended from Mai Sohagan are still keepers of the shrine, and are called *Khádims*. The head of the family is commonly called *Makhdúm* instead of *Khádim*. The present head of the family is Ghulam Qasim.

The offerings, made are large, being estimated at Rs. 8,000 a year. About Rs. 2,000 a year are also collected by the makhdúm in visits to the *muríds*, desciples. He also owns 50 or 60 wells. At all

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times the tomb is a place of pilgrimage for Hindús and Muhammadans and is a favourite shrine at which to cut off the *jhand* or first hair that grows on a child's head. No particular fairs are held, but during the months of Hár and Badra people come to the shrine in large numbers from different parts of the district and from Bhakkar, Leiah and Dera Ismail Khán, Jhang and Montgomery. The number of pilgrims is not so large in the other months. Women come to the shrine to cast out *jins* (evil spirits).

Daira Dín Panáh forms a refuge for an objectionable set of beggars. Any rascal who is discontended at home, or prefers begging to work, wraps a brown *pagri* round his head and calling himself *Shah da fakír* considers himself entitled under the authority of a traditional saying of Dín Panáh, to beg within 12 *koses* of Daira Dín Panáh. He requires no permission or institution from the keeper of the shrine, but makes raids on the neighbourhood on his own account. Some of the *fakírs* get a thread from the shrine as a token of authority. These *Shah da fakírs* travel about with bullocks and donkeys on which they load what they can get. They compel the people by abuses and curses to give. They are disliked by the people and have become a nuisance.

Dín Panáh built the tomb of Mai Suhagin during her lifetime. It stands near the customs (now the District Board) Bungalow. Mai Suhagin's husband Akku began to distrust Dín Panáh when he squandered all his money. Dín Panáh is then said to have shown him a miracle. He took up a corner of the carpet and showed Akku two streams one of gold and another of silver flowing and asked him to take as much as he wanted. This restored Akku's faith. Dín Panáh is related to have wrought several miracles. Akbar is said to have come during Dín Panáh's time as a *sanyasi* and desired to become a *muríd* by offering a lock of his hair. Dín Panáh however refused to admit him to his descipleship. There is a huge bowl called *kishta* lying in the shrine which a camel called *melu* used to carry about his neck in Dín Panáh's time and collect grain in it going about from house to house. He thus supplied the kitchen with the grain requisite for keeping up the *langar*. The bowl which can take 8 maunds of grain is now used as a measure by those who offer to fill it in the event of fulfilment of their desires. The camel was buried at 1½ miles from the shrine in the village of Tibba and his tomb still exists there. The shrine was built by one Mián Haran a *jatt* (camel-driver) who is said to have got as much money out of his camel saddle (*palan*) every evening as he wanted. A peculiar state of affairs is said to exist in the family of heads of the institution. From 13 generations each line has had two brothers. The elder brother has no sons, the younger has two. One of the boys becomes makhdúm. There are always two daughters in the family. They are not married outside the

family. If it is possible to marry them to the sons of the other brother well and good; otherwise they remain spinsters. The elder sister always dies after she comes of age and the younger is entrusted with the charge of the *langar*. The present Makhdúm however appears to be an exception as he has got a son and his younger brother who is dead has left a daughter.

Dáúd Jahániah.

Three miles south of Muzaffargarh, in the village of Rámpur, is the shrine of Dáúd Jaháníah, called by the vulgar Dhudhú Jaháníah or simply Dhudhú. It was founded by Shekh Allahdád Kureshí, who came from Arabia and, having acquired sanctity in the service of Makhdúm Jaháníah Jahán Gasht, settled at Rámpur. His descendants are *makhdúms* of the shrine. They are now Metla Jats. They say they became Metlas from Kureshís because so many Metlas live in the neighbourhood. Additions were made to the tomb by Nawáb Muzaffar Khan, and it was repaired by Díwán Sáwan Mal. The shrine is largely frequented by Hindús and Muhammadans. A metalled road has been built lately connecting the shrine with the Khangarh-Muzaffargarh road. A fair is held there every Thursday, and in Chetr and Sáwan the assemblies are very large. A common vow at this shrine is called *attá, ghattá*, literally "flour and sheep." When the object of the vow has been obtained, the devotee and his family repair to the shrine, taking a sheep and a maund or 20 *sers* of flour: The head, skin and shoulders of the sheep they give to the *makhdúm* with 5 *pices* ($1\frac{1}{4}$ anna), the rest is cooked, and the flour is made into bread and distributed to the poor. The offerings at this shrine were for a considerable time farmed to a *kirár*. The shrine has a celebrity for curing leprosy, and lepers from all parts of the Punjáb and Kashmír resort to it, and persons who have obtained cures, present models of the diseased limb in silver and gold. Baths of hot and cold sand are prepared by the attendants of the shrine for lepers. Such baths are called *rangín*, the literal meaning of which is, the vessel in which dyers dye cloth. The charge for a *rangín* is Re. 1-4. Nur Muhammad Metla is the present *makhdúm* of Dáúd Jaháníah.

Alam Pír.

At the town of Shahr Sultán is the shrine of Alam Pír. It was founded by Sheikh Alam-ud-dín *alias* Alam Pír, a Bukhárí Saiyad, descended from the *makhdúms* of Uch in Baháwalpur. In 1167 A. H. Shahr Sultán was carried away by the river. The shrine and the town were rebuilt at a distance of two miles from the old site, and remain to this day. This shrine is remarkable for the frenzy which attacks the persons, especially the women, that resort to it. In the month of Chetr a fair is held here on each of the Thursdays and Fridays, to which about 5,000 persons come from Dera Ghází Khán, Baháwalpur, Multán, and this district. As the women, most of whom are in *kacháwas* on camels, or riding on horses and bullocks, get near Shahr Sultán, they seem to take leave of their senses, and

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begin to sway the body violently from the waist upwards. Their hair gets loose. They screech, and look like so many bacchanals. In their excitement many fall off their camels on to the ground. The soil of Shahr Sultán is sandy, and they come to no harm. Mr. O'Brien wrote as follows :—" I saw a man, his wife, and baby " come within sight of Shahr Sultán at fair time. The woman and " baby were riding on a bullock which the husband was leading. " The woman suddenly slipped off the bullock, put the baby into " her husband's arms, and started screaming at the top of her " voice across the plain that lay between them and Shahr Sultán, " leaving the poor man standing on the road with the baby and " bullock. This frenzy, which even attacks women at home as fair " time draws near, is believed to be caused by the woman being " possessed by a *jin*, and the term used for a woman so possessed " is *jin khedan*, to play *jin*. After having seen the performance, " one may be pardoned for translating *jin khedan*, playing the " devil." Within the fair, "playing the devil" and casting him out goes on in a regulated manner. In the house of the *makhdúm* of the shrine and in the house of other Saiyads of the *makhdúm's* family, women of the upper class have their attacks of *jin*, and have them cast out to the accompaniment of a *mirási* woman playing on a drum and singing. For ordinary people, four sites are chosen, over each of which a *khalífa* or deputy of the *makhdúm* presides. The possessed women pay him a pice or a fowl, take their seats and begin to sway their bodies backwards and forwards, gradually increasing in violence. The excitement is kept up by a drum being played. The *khalífa* goes round and lashes the women with a whip, and pours scented oil on them. As each woman gets weary, the *khalífa* pronounces some words and sprinkles a little water over her. The *jin* is cast out. The woman becomes quiet, and is dragged away in an exhausted state by her friends. It is hard to imagine a more thoroughly repulsive exhibition. It is difficult to say how much of these attacks are assumed, and how much involuntary. The assaults of *jins* at home may certainly be set down as affected, the object being to make the husband take the wife to the fair. The frenzy on coming near the shrine seems involuntary. The paying of the *khalífa's* fee is as deliberate an act as taking a railway ticket, but when a woman takes her seat with the swaying crowd, she certainly loses all control over herself.

Other shrines.

The other shrines of note are Bagga Sher, literally "white tiger," in the village of Khanpur, 6 miles north of Muzaffargarh; it is so named because a white tiger defended the saint's cows from thieves. The shrine of Miran Hayat is in the village of Panj Girain, seven miles south of Muzaffagarh, there is a stone figure of a camel on which the saint used to ride, there is a forest of date trees near the shrine, the branches of which are said to be like cobras; a branch kept in a house will drive away cobras. He

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was a nephew of the celebrated Ghaus-ul-Azim. His fair is held in Ramzan. The shrine of Dedha Lal in the village of Harpallo is a fine domed building; this shrine, Bagga Sher, and Shekh Laddhu are efficacious for cattle to visit during an epidemic. The shrine of Musan Shah in Jálwála Pír Amir has a considerable celebrity, the fair in Asauj being attended by 8,000 or 9,000 people, but has no remarkable buildings. In the Sanawan *tahsil* are the shrines of Nur Shah in the village of Talái Núr Sháh, of Shekh Palliá and Haji Isḥák, which have a certain local reputation. In Alípur there are no shrines worth mention, except Alam Pír, which has been already described. The favourite time for pilgrimages is Chetr, *i.e.*, from the middle of March to the middle of April, and Sáwan, *i.e.*, from the middle of July to the middle of August. Sáwan is chosen because it is the date-picking month. Along every road dates are being gathered, dried, and taken away for sale. The pickers are allowed to give a handful to each passer-by. Thus pilgrims in Sáwan are almost freed from the necessity of taking provisions with them. Chetr, the month before the harvest, appears to have been chosen for pilgrimages, as a sort of holiday preparatory to the hard work of the season.

Lingri Pír, the rag saint.

In the *thal*, far from any shrine, and on the roads leading to the noted shrines, may be seen occasional thorn trees, covered with rags similar to those near holy wells in Ireland. These are called the Lingrí Pírs, or rag saints. "To account for their existence far from any shrine, it is said that they satisfied the want of women for a place of pilgrimage, and on the roads leading to shrines the rags are said to be placed as evidence that the vow has been performed. Pilgrims also tie knots in the grass of the roadside leading to a shrine, and a common form of making a vow is "if you grant me my desire (*tedì gandh badhesán*). I will tie a knot to you" that is, "I will visit your shrine."

Superstition.

It would be difficult to find a more superstitious people in the world than the residents of this district. They are firm believers in *jins* and the evil eye.

Sap dá khádá bachdaé.
Nazar dá khádá nahín bachdaé.
The snake-bitten escapes.
He that is effected by the evil eye escapes not.

The *jins* appear to be a simple lot, and are easily outwitted or diverted. A ring drawn in the dust, round a heap of corn or a person, will keep them away. The knives which brides and bridgrooms wear are intended to keep *jins* off. In consequence of this credulousness, Saiyads, Kureshís, the keepers of shrines, and any impostors who can inspire confidence, drive a great trade in selling amulets (*rakhrí, chaprí* and *phull*). Among other amulets may be mentioned *mandhání dá phull* the charm of the churn-dasher. This has the effect of attracting all the butter in the churns of the neighbours into that of the possessor of the

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charm. *Biliáni dá phull* is a charm to win the heart of a woman; and so on. The price paid for an amulet is called *mokh*. It would be hopeless to attempt to note all the superstitions, but the following may be mentioned. If an enemy gets any of the *chíkún*, which is rubbed on brides to increase their beauty, and burns it, he will cause disunion between the newly married pair. Among agricultural superstitions are the following:—On the bank of the Indus, in the Sanánwán tahsil, it is believed that if *methra* (*Fenugreek*) seed is sown before noon, *methra* will come up; if sown after noon, *ussún* (*Brassica eruca*) will come up. It is commonly believed that an animal born in Sáwan (July-August) will be unlucky. The strength with which this belief is held was proved in the year 1880. Six Government stallions were, for the first time, then provided for this district, and from April, when they arrived, to July, were eagerly resorted to. From July to October hardly a mare came to be covered. In November they began to come again. The extreme respect and tenderness with which the people regard persons of reputed sanctity are remarkable. The younger brother of the keeper of a shrine of noted sanctity in an adjoining district used to frequent Kot Addu during the First Regular Settlement. He used to get hopelessly drunk, and be seen sprawling about the prostitutes' huts in open day. The Muhammadans of the place always said of him when in this state "he is engaged in devout contemplation." The people, Hindús and Muhammadans, are thorough fatalists. They never personally commit thefts or murders, or bring suits without foundation. It is that unpleasant power, their *nasíb*, which caused all the trouble. They are firm believers in omens. The distinction between good and bad omens under different circumstances is bewildering. One omen is under all circumstances good, that is, to put up a blue jay; and strange to say, to meet a *mullán*, a Brahman, a *fakír* or a beggar is always a bad omen.

Ecclesiastic administration.

There is a church at Muzaffargarh under the Chaplain of Multan who pays a visit to the place occasionally. There are only one or two families of Native Christian who belong to the Church Mission Society of Dera Ghazi Khan.

General character of the people.

The character of the people was very appropriately described by the late Mr. O'Brien as follows:—

"The account given of their superstitions will not have given a very high opinion of the character of the people, but they have many good points. They are very hospitable. 'Not even an enemy should go away when the baking-plate is put on the fire,' says a proverb. They are ready to render help to one another. If a man's house is swept away by a flood, the whole village will help him to save his property. If his cattle are stolen, he has no difficulty in getting several parties of men to follow the thieves. At ploughing and sowing time they are ready in bringing their bullocks and ploughs to help. They are very docile, and only require kindness and firmness to be easily managed. At the same time when an order is distasteful, though it meets no open opposition but often ready asent, yet it is liable to be frustrated by stolid indirect resistance.

There never was a people that better understood the 'I go sir, and went not' kind of disobedience. Morality is very low. The common people will steal anything they can. They are so mendacious that the pleasure of associating with them is spoilt by the ever-present knowledge that you may be taken in. Sexual immorality is universal. They are not a cheerful people. In conversation they seem to remember nothing but droughts, failures of canals, blights, deaths of cattle, and every possible misfortune that can befall a farmer. They are absolutely wanting in any public spirit. I have heard a *tahsildar*, as the worst punishment he could inflict on a recalcitrant *zamindar*, threaten to get him appointed on the district committee."

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General character of the people.

The hospitality, docility, the low morals and mendacity are the important characteristics, and cattle-lifting is practised as a sporting and adventurous pursuit. As regards the disregard for truth a zaildar, well known for his general truthfulness, said that in one way it was correct to call the people liars and in another way it was not. He said that in all important matters where it was necessary to make a statement to officials, a council was always held at home and the line of action decided upon. Each of those present decided what he would say and all said *Duakher* (invoked blessings), or swore on the Koran to be faithful to the undertaking. When, therefore, a man went to an officer and told him a barefaced lie even on oath, and he owned that he was not an exception, he was only discharging a self-imposed obligation and the people considered him a truthful man; while on the other hand if he told the truth he would be breaking the oath taken at home and be adjudged a false man.

Appearance and physique.

The people of the district are generally of middling height, about 5 feet 6 inches (there are very few men over 6 feet high), and are characterised by a dark brown complexion, blackish brown eyes, a thick and flat nose and coarse features. The body is generally well built, the chest and arms are proportionately well developed, but the calf muscles are not.

The inhabitants of the Thal have better physique than people living in canal-irrigated tracts and are supposed to live longer. This is evidently due to the drier and healthier atmosphere they live in. The inhabitants of the Rangpur sub-tahsil adjoining the Jhang District have just as good if not a better physique than the Thal and are more good-looking, being taller and having somewhat sharp features with an eagle-nose. Going round the Thal, I met a man over 100 years old (he said he was about 5 score and five), who was sitting on the *gádhi* and driving his bullocks on the well. He came running up to me, and no one else being present offered to accompany me to the next well which was about 2 miles away. The offer was of course refused with thanks, but the man looked quite healthy and strong and did not seem to think much of having to go a couple of miles at a fast walk. The old man has died since. There are other men too in the district who are over 100 years old, but the ordinary age of a man under normal conditions is supposed to be 60 or 70 years. One comes across fairly strong men all round

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the district and particularly in the Thal, but I have not seen any feats of exceptional strength being performed. Looking at their mode of life in isolated huts on wells, one would expect the zamindars to be of a much better physique than the ordinary peasant in the Central Punjab who lives in large village homesteads. But such is not the case.

Good looks.

A man is considered good-looking who is tall and slim, has thin lips, a sharp eagle-nose, a round face, black eyes, a long neck and a golden complexion. The following song illustrates this partly :—

"*Yár assáda koí patlá patang he,*
Mor di gichchi jêda sonedá rang he."

"My lover is like a thin kite, he has a neck like that of a peacock and a complexion of gold."

A women should not be very tall. A pit in the chin is a mark of beauty and the eyebrows should be curved like a bow and joined in the centre.

A pot-belly is considered ugly and is looked down upon.

There is a saying :—

Ap na mándá te gánb tari ándá.

"There is not enough room for himself and he comes shoving his pot-belly in."

Tattooing.

Tattooing is common among Hindu (Kirar) women of the district. Men do not go in for it, nor do the Mahomedans like it. Tattooing is done merely for the sake of beauty. The marks are found on the forehead, cheeks, lips, shoulders, arms, wrists, and back of hands and feet. They are circular and irregularly made. Generally one sees a number of dots in a line or in a cluster. The operation is made when the girl is between 7 and 10. Some other girl performs the operation with a common needle, picking holes so as to make the desired figure. Antimony and butter are then mixed up and the parts operated upon are anointed with the mixture. The skin heals up in about a week and there are no evil results.

Occupations.

Table XVII gives details of occupations registered at the last census. The more important figures are noted below :—

Occupation.	Workers.	Dependents.
Stock breeding	3,910	3,395
Land-holders and tenants	67,265	1,49,975
Agricultural labourers	8,683	9,660
Personal and domestic servants	3,279	5,491
Provision of vegetable food	7,958	12,029
Cotton weaving, spinning and ginning	7,906	12,796
Leather dyers and butchers	3,030	6,412
Religion	1,395	2,728
General labour	11,045	17,221
Property and alms	7,341	7,910

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Occupations.

This is an entirely agricultural district. The proportion of land-owning and cultivating classes is very large. Next in importance come agricultural, general and domestic labourers, graziers and artizans connected with agriculture. Weaving and other pursuits relating to the manufacture of cotton goods constitute the most important industry in the district. The large number of persons depending on religion, *viz.*, Pirs, Mullans, Brahmans, and the still larger proportion of beggars is a noticeable feature. The number of persons engaged in trading and money-lending is small.

Daily life.

The larger zamindars, with a few exceptions, lead a more or less lazy life. An occasional visit to the fields or wells in the morning finishes the arduous part of their duty. The time between breakfast and dinner is usually spent in chatting (mostly with menial servants) lying down or playing some indoor game like chess. The ordinary zamindar has his day very full. Where he has a well he has to keep up during part of the night if his turn of irrigation comes by night. Otherwise he gets up early in the morning about 4 o'clock in summer and 5 or 6 in winter and begins to plough his fields or attend to the agricultural work of the season. The breakfast is taken out to the fields by the wife about 9 or 10 o'olock and when he has done some work after breakfast he lets his bullocks loose or ties them up as may be necessary, and takes a little rest at midday usually having a siesta under the shade of the nearest tree. As soon in the afternoon as it is cool enough to start work, he is up and doing again. He returns home in the evening generally with a bundle of grass for the cattle, has his evening meal and goes to sleep. During the day the *hookah* (hubble bubble) is a favourite companion, particularly on the wells. Every passer-by asks for a smoke. During harvest times the peasant has a very busy time of it. Harvesting operations start early in the morning and all available hands in the house go out to assist the cultivator. With the exception of a short rest at midday, work goes on from morning till evening.

The peasant women have an equally, if not a more laborious, routine to attend to. They get up long before sunrise, grind corn for the day's use and churn milk before sunrise. The cow has then to be milked, water has to be brought from the well, canal or creek, and then the breakfast has to be cooked. The wife then takes the food out to her husband in the field. On her return she attends to miscellaneous household duties, such as spinning cotton thread, ginning cotton, sewing, mending clothes and looking after the children. In the afternoon she again grinds corn for the evening unless there is enough flour left out of the morning's supply, fetches more water and cooks the evening meal. At harvest times the peasant women also go out to the fields and help in sickling the crops. The ordinary Kirar opens his shop early in the morning after a wash and sits there the

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whole day long or till after sunset, having his breakfast brought there or going home for breakfast for a short while.

Divisions of time.

The day and night are divided into eight *pahars* of three hours each, but there are no means for the exact indication of the commencement and termination of each *pahar*. The Persian wheels on wells are worked by *pahars*, each co-sharer having the exclusive use of the well for so many *pahars* every day. The zamindars go by the sun during the day and by the moon or stars during the night. The division is good enough for all practical purposes, but cannot of course be exact. The names for the different times of the day are :—

Sarghivela	Early morning about 3 or 4 A. M. when the early meal is taken during the fasts in Ramzan.
Dhammivela-Namazvela	Dawn—time of morning prayer just before sunrise.
Fazir	Morning—after sunrise.
Rotivela	About 10 A. M.—breakfast time.
Dupahar	Midday.
Peshi	Early afternoon—2 to 3 P. M.
Digar	Late afternoon—an hour or so before sunset.
Dinh Lattha	Sunset.
Nimashán	Just after sunset—twilight.
Khaopío	Dinner time, about 8 P. M.
Kuftán	Time to go to bed—about 10 P. M.
Addhi rát	Midnight.

Nikki Peshi and Dhalli Peshi and Nikki Digar and Dhalli Digar are terms used to signify further sub-divisions of the afternoon.

Food.

The people usually eat two meals a day, one before noon, generally at about 10 o'clock (called Rotivela) and the other directly after sunset. An early meal is also sometimes taken soon after sunrise and called Nirán (meaning, taken on an empty stomach); or Hánjbal (the heart sustainer); and another light meal in the afternoon, called Pichhain. The staple food grain is jowar or bajra in the winter and wheat in the summer. Rice is grown largely, but is not favoured as a sustaining food and is generally exported. It is eaten only when the peasant has rice in hand and cannot afford to purchase more expensive food grains. In that case unhusked rice is ground into flour and made into cakes. In the summer the poorer people content themselves with barley instead of wheat, and those who cannot even afford barley will eat gram or peas or other cheap grain, and sometimes in years of scarcity men in the Thal eat the Bhukal seed (asphodelus tishilosus). In every case the food grain is ground into flour and *rotis* (cakes) are made thereof and eaten with *dal* (pulses), vegetables if procurable), sugar, salt or *lassi* (whey). Poor people often eat *roti* without any accompaniment. Meat is rarely etaten, except on

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festivals, or when an animal is killed to save it from dying a natural death or of disease. Fish is largely eaten. Dates form the staple food of the poor for months, and are much eaten by others during the season with or without *roti*. Ber (fruit of zizyphus jujuba) is a favourite additional food and lily stems (bhe or pabban) are largely eaten in the central tracts of Muzaffargarh and Alipur. *Lassi*, (whey) is a favourite drink of the agriculturist at the day meal and milk is taken at night if it can be spared, but it is generally required for making whey in the morning. Butter is eaten with the *roti* as a luxury or is put into *dál* or vegetables during the cooking. As a rule the women cook the food and the whole family mess together. In well-to-do families where *purdah* is observed, the men usually mess separately from the women.

Taking into account the large quantity of dates, mangoes, vegetables and lily roots (babbin) eaten, the consumption of food grain may be estimated at about 5 maunds per annum per head or about $2\frac{3}{4}$ seers a day for an agriculturist family consisting of an old person, a man and his wife and two children, thus :—

The old person	$\frac{1}{2}$ seer daily.
,, man	$\frac{3}{4}$,, ,,
,, wife	$\frac{3}{4}$,, ,,
2 children	$\frac{3}{4}$,, ,,

Dress.

The ordinary clothing of an agriculturist consists of a plain turban, a scarf *chádar* of cotton cloth worn on the upper part of his body and a loin cloth which is fastened round the waist, the folds of which hang down like a petticoat. When active exertion is required, the folds are collected, passed between the legs and tucked into the waist at the back. This is called *manjhlá*, *tahmat* or *dedhá*. A pair of shoes completes the working-day dress of the Jat. Shoes are described as *ghetlídár* if the upper leather be in one piece, or *kannedár* if it be in two pieces. The richer classes and the ordinary peasant on state occasions, instead of the working dress above described, wear a peaked cap (*topí*) with a coloured turban wound over it. A *dupatta* of English cloth takes the place of the common *chádar*, and a silk *lungí* or *khes* is added either as a scarf or wrapped round the waist; a *chola* which is like a waistcoat with sleeves and skirts is worn, and in the place of the *manjhlá*, drawers made very full and baggy are worn; these are called *shalwár*, or if cut straight to the leg and tight, *suthan*. On the bank of the Indus and in the south of the district the long smock peculiar to the Biloch is often seen on both men and women. Peasant women wear a scarf called *bhochhan*; it is called by different names according to its colours; a boddice called *cholí* that looks as if it was made of patch work; it is, however, a work of art, and each piece has its well-known name; a petticoat or drawers are also worn—sometimes both are worn at the same time. In parts, especially in the north-east of the district near Rangpur, instead of petticoat or drawers

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the women wear a *manjhlá* like the men. A pair of heelless shoes completes a Jatni's dress. Ornaments worn differ according to the wealth of the wearer. The following are always worn except by the very poorest women :—

Kangan or bracelet.	*Válián* or earrings.
Nath or nose-ring.	*Chura* or bracelet.

To be said to have the "ears of a cat," *i. e.*, without earring, is a reproach hard to be borne by the ladies of the district. Women wear their hair in four ways according to their time of life. While they are small girls, the front hair is cut straight across the forehead, and the back hair is allowed to hang loose; the hair in this stage is called *chhatte*. As a girl grows up, her hair is plaited on each side of the forehead, these plaits are called *mendhián*: and the unplaiting of them is a solemn ceremony which takes place at marriage. After marriage, the front hair hangs loose, and the back hair is plaited into a tail; the front hair is called *dharí* and the tail, *gut*.

The ordinary dress of the Kirars is a *topi* (cap) on the head, a *chola* (sleeved jacket) and a *dhoti* (cloth usually home-spun tied round the waist and hanging down to the knees with the ends passed between the legs and fastend at the back). The Hindu women wear a *bhochan*, *choli* or *kurta* (jacket) and a *manjhlá* or a *ghaghra* (petticoat). English cloth is coming more and more into use and the average zamindar now wears longcloth instead of the course home-spun (*khaddar*), while in winter vests made of some woollen stuff are worn over the jacket.

Dwellings and furniture.

The rural population are lodged in houses of three kinds. Each has its peculiar name. *Kotha*, a house with mud or brick walls and a flat roof; *sáhl*, a house with mud or grass walls and a thatched roof; *gharíra* an arched hut of grass. *Gharíras* are most used in the inundated parts of the district. A very few of the wealthier agriculturists own a *márí*, *i.e.*, masonry house of one or two storeys, and some have in the neighbourhood of their dwelling-house a courtyard with sheds which answers the purpose of a guest-house and a place for meeting to transact business. Such a courtyard is called a *visákh*. The following description will apply to 99 out of 100 rustic home-steads. The dwelling-house is a *sáhl*. In front of it is a small courtyard partly or entirely enclosed with a mud wall or a fence. Within this from a tree or from posts hangs the baby's cradle (*pinghúra*) made of wood, reeds, or a blanket slung hammockwise, and in the corner stands a branch of a tree, the thick end of which is fixed in the ground, and the smaller branches of which are cut down to stumps. The thick part is used to tie the churning apparatus when churning is going on, and the milk vessels, after being cleaned, are hung on the stumps of the branches to dry and air. This is called a *nahíla*. Outside the courtyard

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Dwellings and furniture.

is a larger enclosure in which cattle are tied, and a few stacks of fodder stand. Attached to the house, or at a little distance from it, is a cattle-shed called *bhána* or *dhuính*, where the cattle are housed during the winter. Inside the dwelling-house, which consists of a single room, is a large wooden platform, *manhín*, on which a mat of reeds is spread. On one corner of the *manhín* are various baskets holding cotton in various stages of preparation for spinning. In one basket, called a *taungar*, are the best clothes of the family. There are also two trays called *patrota*, one of which contains the small articles for women's use: looking-glass, tooth-stick, comb, needles and thread which a bride receives from her mother, and which are called *sanjhá*; the other contains the ornaments in daily use. At the other end of the *manhín* are the family bed clothes, and there the father, mother and children sleep at night. Grown-up sons and daughters are accommodated on charpoys. Under the *manhín* are kept the store of new earthenware vessels belonging to the house, the *ghurat* or hand-mill, and the mortar for husking called *chattú* and pestle *mohla*. At the other end of the room is the fireplace at which meals are cooked, and near it two baskets, the larger of which contains the cooking vessels and dishes in daily use, and the smaller the family store of spices. Near the walls are two or three earthen cylinders for holding grain, clothes, and odds and ends. The spinning wheel, spindle (*úra*), winnowing basket, sieve, the iron stand for pots when cooking and the cotton gin are hung on pegs driven into the walls. From the roof hang one or two strings of cord for keeping *ghí* or cold food safe from ants and cats. A net of large meshes called a *trangar* is also hung from the roof, which holds clothes and blankets, and if the family owns a *Kurán* it is kept in the *trangar*. A spare charpoy or two completes the furniture. Outside the house are one or more high platforms called *manhán* (Hindustáni *machán*). On these the family sleep in the hot weather to be out of the way of mosquitoes. In the flooded parts of the district the *manháns* are from ten to twelve feet high, and in heavy floods the people are compelled to spend day and night on the top for weeks together.

Death ceremonies.

At the moment of death among the Mussalman, alms are given to the poor. The corpse is washed by the *mullán* if deceased was a man, by the *mullán's* wife or by female relations if deceased was a woman. The corpse is dressed in grave-clothes called *kafan*, is placed upon a charpoy, and over it is spread a rich cloth called *uchhár*. The corpse is carried to the graveyard by the friends and relations. The *uchhár* is the perquisite of the grave-digger. The corpse is placed in a shelf (*sámí* or *asámí*) at the side of the bottom of the grave. Its head is towards the north, and the face to the west. Near the mouth is placed a brick, with the *kalima* written on it. No food is

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Death ceremonies.

cooked that day in the deceased's house, but friends send food for the family and for visitors who come to offer their condolence. Such food is called *kaura vatta*, and visits of condolence, *mukán* or *parcháwan*. At every stage of the proceedings, presents are given to the *mullán*, and for forty days after the death, food is daily given to him. There is no doubt of the truth of the local saying :—

Dhammi vele mullán karé pukár
Ya Rab Sáin koi chokhá mar!

In the morning the *mullán* breathes a prayer
"O Lord God! kill a rich man to-day!"

Two useful words to remember in all domestic ceremonies are *kándha*, an invitation, and *vel*, a present to the attendants, midwives, barbers, *mirásís*, *mulláns* and *Brahmans*. One would like to be able to trace a connection with the old English word *vel*, meaning present to servants.

Among the Hindus the funeral ceremonies are the same in the main here as elsewhere. But the breaking of an earthen pitcher over an iron instrument, on the way to the burning place, and the formal permission asked by the *bhat*, on the fourth, tenth and thirteenth day after the cremation, from the assembled relatives, for the son of the deceased to be allowed to bathe, shave, and change his dress, is peculiar to this locality. The supposed funeral uncleanness lasts for thirteen days. When an old man dies leaving a large family of sons, during the advance of the body to the burning place all the follies of the *Holí* festival are practised. One son will be thrown down; another will have three or four shoes tied round his neck, while a party of three in the rear amuse themselves with striking with shoes one of the grandsons. In short, buffoonery and merriment take the place of solemnity and sorrow.

Amusements.

Most of the amusements of the people have been incidentally mentioned already, such as going to fairs at shrines, marriages, funerals, and visits of condolence. It is a common amusement to race bullocks at wells. A pair of bullocks are yoked to the wheel and driven round as fast as possible for about half an hour, then another pair, and so on till the competitors have all had a turn. The by-standers then decide which pair is the winner. Very often bullocks race singly. The owner of the winning pair receives no reward, but is expected to give food or sweetmeats to the company. The competition interests the Jats intensely. The ordinary spectator can conceive nothing duller. The only remarkable thing is the excitement of the Jats and how they manage to raise it. The favourite day for bullock racing is the first of Visákh (April-May); hence bullock race is called Visákhi at whatever time of the year it may occur. Wrestling, here called *malhan*, goes on at every large meeting. *Jhummir* is a circular

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dance which Jats dance at weddings, and wherever they happen to collect in large numbers. They move round in a circle, dancing and clapping their hands in time. Three kinds of *jhummir* are well known: *lammochar jhummir*, or southern *jhummir*; *traitárí jhummir, i.e., jhummir* with three claps of the hand and a pause which means four times; *tikhí jhummir*, or quick-time *jhummir*. A young man who can't dance *jhummir* is very lightly esteemed. The ladies will greet him with—

> "*Na jhummir na tárí,*
> *Te ajaí munh te dárhí.*"
>
> "Can't dance *jhummir* or clap your hands!
> Why, the very beard on your face is no good."

The dance is Baluchi in its origion and the camel-drivers are experts at it.

The Kirárs play *chhej* in which dressed in gaudy clothes they stand in a circle with sticks like policemen's batons in their hands, and go round to the beating of a drum, striking their sticks together as they move. The batons have sometimes little bells attached to them, and the men often wear strings of bells above their ankles. *Doda* (base) is a favourite game of the peasants. *Chapli* (tent-pegging) is practised by young riders, particularly on the Rangpur side.

Horse-racing (*Háth*) is also indulged in. Fishing is a sport on the banks of the rivers. During the quail seasons large numbers of quails are netted. The drive is considered great sport. A few people shoot with guns and rifles, but many keep dogs for pig hunting which is a favourite sport, particularly in the riverain tracts. People turn out by the hundred and take a number of *munj* rope nets which are fixed at one end of the jungle, the people driving with dogs from the opposite end. Some of the pigs are netted, others are shot and some are caught by the dogs. The Labanas keep nets as a rule, but some Jats and Biloches also keep their own nets and catch the pigs when they get into the nets. It is a plucky performance. Birds are shot with bows and arrows. Blunt arrows (called *ghaz*) with heavy tops are used. These fly in a vertical position and the way in which some experts near Kot Addu shoot partridges and quails with these arrows is quite surprising.

Boys' games are—

Díti dandá, or Tip cat.
Danda gílí, or Hopscotch. *Chidda*, Marbles.
Kaudí, a sort of prisoner's base, and
Dodá, Base.

Music.

This is not a very musical district on the whole, yet common people are fond of it in their own way. The common people usually sing *dorhás* in a shrill voice and monotonous tune. The next advanced stage is singing *Kafis* (verses composed by Bawa

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Faríd of Chácharán). There are also a few people who know something of advanced Indian music. The *Mirásís* generally sing well. In the towns dancing girls keep up a low class of music, and they are also requisitioned at marriages in villages. Drums and pipes are always in demand at festivals and weddings. The women always sing in company at marriages and other festive occasions.

Festivals. Fairs; religious gatherings.

The fairs held every Thursday at Rámpur or Dínpur, a village three miles to the south of Muzaffargarh, at the shrine of Sheik Dáúd Jaháníah, have been already noticed. The usual attendance is about 5,000. There is a fair held at Khánpur, a village 6 miles from Muzaffargarh on the Rangpur road, at the shrine of Bagga Sher, on Mondays in Sáwan and Bhadron, and on the Mondays after the *Ids*. The usual attendance is 2,000. It has already been mentioned, the original name of the saint was Sheikh Muhammad Tahir. A fair is held at Harpallo, a village 20 miles south of Muzaffargarh, at the shrine of Dedha Lál, every Wednesday in the months of Hár and Jeth, the attendance being about 2,500. The shrine has been already noticed. The original name of the saint was Shaháb-ud-dín. He is said to have got the name of Dedha Lál because he was converted to saintship by Makhdúm Jaháníah of Uch, who on the occasion turned milk into blood, and made Dedha Lál drink it. A fair is held at Jálwála Pír Amír at the shrine of Músan Sháh, already mentioned, near Ghazanfargarh, 17 miles south of Muzaffargarh. It is held on the 12th of Asauj, and is attended by 5,000 people who come from the surrounding districts—wrestlers wrestle there. A fair is held at Háji Metla, a village 13 miles from Muzaffargarh on the Kínjhir road, at the shrine of Muhib Jaháníah. It is attended by about 3,000 people of the locality. There is wrestling and occasionally horse-racing. A fair is held at Kiri Ali Mardán, a village five miles from Rangpur, at the shrines of Pír Ali, Pír Kamál, and Pír Fatteh Darya, on Fridays in the month of Jeth. The attendance is about 2,500. The tombs of Pír Ali and Pír Kamál are *naugazas*. In times of cattle plague, cattle are brought there to be cured. A fair is held at Fattu Fanakka, a village near Rangpur, where there is the shrine of Dín Sháh, every Friday in the month of Asár. The attendance is about 2,500. Large gatherings take place on Mondays and Sundays from Hár to Bhadron at Dáira Dín Panah at the shrine of the saint Dín Panáh Bukhári, of whom an account has been already given. The attendance is from 100 to 500 daily. A fair is held at Talái Núr Sháh, a village in the *thal* where there is the shrine of Núr Sháh, on the 14th of Poh. The attendance is about 2,000. The shrine has only a local reputation. The fair at the shrine of Alam Pír has already been described. On both *Ids*, people gather together in large numbers to say their prayers at the *Idgah* or the largest mosque at the place or in the open where

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there is no such building. The Hindu festivals are Dussehra when an effigy of Rawan is made and burnt; Diwáli when the houses are lit up by *chiraghs* and bazars illuminated; Holi which is a holiday during the early spring for all kinds of buffoonery; and Bisakhi which is observed as a sacred day being the commencement of Bikrami year. A horse and cattle show is held annually at Muzaffargarh in the beginning of March and is attended by people from all parts of the district.

Names and titles.

There is nothing peculiar about the names in the district. Some of the Muhammadan names contain the name of God or Prophet or some saint, such as Allayár, Muhammad Khan, Fatteh Muhammad; some are composed of words meaning blessings such as Jindwadda (long lived), Waddhu (prosperous) among men, and Satbhirai (having seven brothers) among women. Certain names imply the grace or protection of God, such as Allah Diwaya (given by God) or Allah Rakhia (protected by God). It is a common thing among the Mussalmans to call a son after his grandfather. For instance, Ahmad's son will be Mahmud, and his son will be Ahmad again. Ahmad will in turn like to call his son Mahmud. The names of Hindús are similar to those in other Western Punjab districts.

Names are often contracted, *e.g.*—

Khuddá	Khudayar-Khuda Buksh.
Sheru-Shera	Sher Muhammad.
Alu	Alam Khan.
Mamdu	Muhammad Khan.
Haku	Hakim Khan.
Jallu	Jalal Khan.
Shammu	Shams-ud-din.
Samela	Ismail.

Nicknames are sometimes given to men from their personal qualities, such as Bora (deaf), Thulla (fat), Jhatti (snatcher).

Sometimes a man calls his sons by names which rhyme with each other; *e.g.*, Muhammad Yár, Ahmad Yár, Barkhurdár, Allayár.

The titles of respect used are:—

Malik for Jats, Khan for Biloches and Patháns, Shah for Sayyads, Mian for Qureshis and sometimes for holy men of other tribes, Jam for Dammar and other Jats of Sindhi origin in Alipur, &c., Rai for certain Jats, and Makhdum for managers of large shrines. The Hindu titles are:—Chaudhri for leading men all over the district, Mukkhi in the Alipur tahsil, and Bhagat for piously inclined men everywhere.

CHAPTER II.—ECONOMICS.

Section A.—Agriculture.

CHAP. II, A.

Agriculture

General agricultural conditions.

The soil of the district consists chiefly of alluvial loam more or less mixed with sand and interspersed with patches of clay, sand and salt impregnated soil. On the whole the soil is uniformly good, but agricultural conditions depend, not on so much distinctions of soil, as on facilities for irrigation. The district has practically no cultivation depending on rainfall alone. The agricultural conditions, therefore, differ according as cultivation is carried on by one or another means of irrigation or flooding. The land is fairly level throughout the district with a gentle slope from north-west to south-east except the Thal tract at the north which has a large quantity of loose sand lying about in the form of sandhills, large or small. From an agricultural point of view the district may be divided into (1) the riverain tracts, (2) the cháhi-sailáb tract, (3) the central canal-irrigated tract, and (4) the Thal.

The riverain tract.

The floods of the Indus spread over the low-lying tract along the whole of the western side of the district. The Indus, as is well known, brings down enormous quantities of water in summer and it naturally overflows the banks of the winter main stream and runs inland until it is checked by artificial protective embankments, built almost throughout the length of the district. The length of this tract may be taken roughly as 118 miles; its breadth varies from 2 to 9 miles. The water of the Indus carries a good deal of sand with it, and in consequence of the great strength of the current it cuts up and spoils land very quickly while it takes time in silting up depressions and leaving alluvial deposits. The conditions of the tract throughout the district are very much alike, small plots of land here and there being of superior quality compared with the average lands of the tract. Kharíf is grown only on the higher pieces of land which are above the reach of ordinary floods, and the crops usually sown are *jowár, bájra*, cotton, and *til*. The principal crop grown in rabi is wheat. Next in importance come gram, *ussun* (Brassica eruca) and *massar*. Very little peas and barley are grown. *Massar* and *sumukka* are usually sown on newly formed land. Cultivation depends on the *sailab* (moisture from inundation) helped in places by wells and *jhallárs* (Persian wheels) put up on creeks, depressions or ponds. The main stream of the Chenáb confines itself within narrow limits and has consequently cut deep into the ground. The floods of this river do not, therefore, spread far and wide. The tract inundated by the Chenáb is about 127 miles long and varies in breadth from 1 to 6 miles. Its silt deposit is very much richer than that of the Indus, and its water is more fertilizing. Similarly to the Indus riverain,

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The riverain tract.

cultivation in the tract flooded by the Chenáb depends mainly on the moisture received from the annual rising of the river assisted by wells and *jhallárs* put up on creeks, depressions and ponds. The crops grown on the Chenáb are also the same as on the Indus, the only difference being that peas are grown in a much larger proportion here and are used up or sold as fodder, while *massar* is not such a favourite crop. The proximity of markets is a great advantage to this tract. The river called Chenáb is really a collection of the five rivers of the Punjab. At the extreme north-east of the district it consists of the rivers Jhelum, Chenáb and Rávi, and the Ghara (Setluj and Beas combined) joins it about 12 miles below the north-east boundary of the Alipur *tahsil*. The fertility of the Chenáb in the district is due to the rich silt brought down by the Jhelum.

The *cháhi sailáb*.

The tract lying within the two riverain tracts near the apex of the triangle is called *cháhi sailáb*, because cultivation therein depended at one time entirely on floods assisted by wells. The floods of the Indus used to spread over the whole of the tract during the summer and people used to go about in boats. The Indus protective embankments are, however, being gradually extended to the south and a considerable portion of the tract has now been protected on the west. The result has been that canal irrigation has been extended down to the centre of this tract. It is only when the floods of the rivers rise very high that the tract not receiving canal irrigation now gets *sailáb*, and what little *sailáb* is received comes not by a direct spill from the river, but through creeks or back-waters. The soil has plenty of saltpetre in it. The favourite crops of the tract are rice on the canal-irrigated lands, followed by peas, and wheat, barley and gram on lands which get *sailáb*. A small quantity of sugar-cane is also raised in the best canal-irrigated villages. This circle is 24 miles long and from 4 to 12 miles broad.

The *rabi* crops are brought to maturity with the help of wells and *jhallárs* put up on creeks, etc. The wells, though a great help, cannot be expected to do much in this tract until the lands have been thoroughly soaked by canal or flood water.

The central canal-irrigated tract.

Lying between the two riverain circles and above the *cháhí sailáb* is the central tract which is irrigated from canals and contains the best lands in the district. Putting the three *tahsils* together this tract consists of one compact block 88 miles long and from 8 to 26 miles broad with a cluster of 14 estates isolated at the north-east of the district near Rangpur. The tract inculdes the Nahri Thal of Sinánwán and the whole of the Muzaffargarh Thal which is mostly canal-irrigated. The soil varies in richness from place to place.

The canals are all inundation canals and depend upon the annual rising of the rivers. They usually begin to flow in the month

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of May and last till September or October. The canals derived from the Chenáb sometimes cease to flow as early as August. There are two series of canals : (1) The Indus series which are derived from the Indus, and (2) the Chenáb series taken out of the Chenáb. The fertilizing power of the water of each series of canals corresponds to that of the parent river. But while the Indus Canals bring a constant supply for quite six or seven months, the Chenáb series cannot be depended upon for more than four months. The construction of a large perennial canal from each of the three rivers, Jhelum, Chenáb and Rávi is evidently responsible for an early fall of the water-level in the so-called Chenáb. The system of agriculture is more or less alike throughout this tract. The important *kharíf* crops grown are—indigo, rice, sugar-cane, *jowár*, *bájra* and cotton. Indigo flourishes in sandy soil and is more in favour in the canal-irrigated parts of the Thal. Sugar-cane is grown successfully in certain groups of villages, while the other crops are found in varying proportions all over the tract. The principal *rabi* crop is wheat, but barley is also grown by the poorer peasants. Peas and gram are raised as double crops off rice. Tobacco is grown in small quantities. With the exception of sugar-cane, the *kharíf* crops depend mostly on canal irrigation, while the *rabi* crops have to be helped to maturity with irrigation from wells, except gram and peas which are grown on rice fields and require no further irrigation. Ordinarily, every holding is supposed to possess a well or a share in a well. A portion of the holding, generally one-half, is sown with *kharíf* crops ; the other part is ploughed up with the help of canal water and sown with *rabi* crops in October or November. The well is then put into working order and the wheat or other irrigated *rabi* crops are watered till the beginning of April, *i. e.*, till the harvesting time.

Very rarely, when the canals run low unusually early, the wells are put in working order to assist the sowings ; otherwise well waterings begin when the crops have been sown. In some years, on the other hand, the canals keep running throughout the year, and, the wells are worked very little, if at all, in some villages. Farming in this circle is on a somewhat large scale, and accordingly not very economic, except on the wells adjoining the Thal, which are similarly circumstanced to the Thal itself. On the other wells, the land is generally divided into two halves, and the usual practice is to take two crops (*rabi* and *kharíf*) off one piece, and then let it lie for two harvests, treating the other half similarly in the meantime. There are some pieces of land called *pattis*, which are attached to no well, and here it is generally not possible to grow any *rabi*. So these are reserved exclusively for *kharíf*, and the same crops are sown every year. On the other hand, the area under *rabi* crops being larger than that under *kharíf*, there are plots which are sown every year with *rabi* without the advantage of a *kharíf* crop being raised after the *rabi*.

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Agriculture
The central canal-irrigated tract.

At the same time there are pieces of land where rice is grown and is followed by gram and peas, and thus two crops are raised every year. The use of manure is not common. On the wells, lands being prepared for *rabi* are thoroughly manured. Then no manuring is necessary for rice or indigo if they follow wheat, otherwise rice fields require manuring. Indigo needs no manure. If cotton is sown after wheat, then the land must be manured a second time. In case of other crops it is not essential to manure the land after harvesting the manured *rabi*. But in practice, the zamíndár does not like to sow his crops without having previously manured the land, unless he is too poor to afford it. Rice is largely sown in tracts affected by *somá* (percolation of water), but the land is never manured.

Somá.

While the spread of canal irrigation has greatly improved the agricultural conditions in this tract, the abundance of water has seriously affected the land in many places in another way. Over a considerable portion of this central tract, the more notable places being land round about Sinawan in the Sinawan *tahsil*, between Muzaffargarh and Rohillanwali in the Muzaffargarh *tahsil* and north and south-west of the town of Alipur in the Alipur *tahsíl*, the water level has risen to very near the surface of the ground and in summer when the inundation canals are in full flow, water actually rises to the surface and in a short time the land is under water. This phenomenon is known as *somá*. The appearance of *somá* affects cultivation in many ways. First of all it brings saltpetre to the surface of the land and makes it almost unfit for cultivation. With considerable manure it is possible to raise a *rabi* crop where the water dries up early enough, but no *kharíf* crops can be raised except rice which naturally flourishes in abundant water. But even rice will not yield sufficient grain where the land has been saturated with saltpetre brought up by *somá*. Secondly, this oozing of water generally begins towards the end of June and goes on sometimes till October. The lands are therefore under water all this time and do not dry sufficiently early to allow ploughings for the *rabi*. Whatever *rabi* can therefore be sown suffers either on account of deterioration of the soil or in consequence of being sown late. Thirdly, it ruins all grass and pasture and therefore the cattle have to be fed on straw or other produce of the land, or fodder has to be bought for them. In some tracts which are badly injured by *somá*, one sees that bullocks will not touch the grass which grows in the waste after the water has dried up. Fourthly, the walls of *kacha* houses (and there are few *pakka* houses in the villages) melt when *somá* appears. This melting of the mud walls begins at the bottom, and when the process has worked through and through a wall for about 2 feet the whole wall crumbles down.

Causes of *Somá*.

The principal cause of *somá* is excessive moisture caused by over irrigation from inundation canals. The set of one or the other river helps greatly in forcing up the spring level. The soil

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Causes of Somá.

throughout the district having an admixture of sand, even the hard *darh* soil having a sub-soil of soft alluvium, percolation goes on unobstructed. Abundant rainfall which is, however, rare in this district, helps to make the water-logging worse. *Somá* is found largely in densely cultivated bits and rice cultivation has a good deal to do with it. Rice cultivation, as is well known, requires a large quantity of water. Indeed the more water in the fields the better for the crop. It is said that a rice field should always have water standing in it. This being so, a large tract where rice is cultivated to a very considerable extent would be eminently predisposed to the appearance of *somá*, when the other causes above described are also at work. Evidently the extension of rice cultivation began originally with an abundant supply of canal water in the *darh* villages, and it was enhanced on account of the sub-soil moisture which was very favourable for the rice crop. As is usual with ignorant people, they blindly pursue a course too far, once they find some people benefiting by it. This is what has happened here. Rice cultivation is easy and does not require much labour. This is the chief reason why it recommended itself so much to the lazy zamindar of this district. The circumstances at first favoured rice cultivation. Rice cultivation has now in turn brought about conditions rendering the cultivation of any other crop impossible, and even this crop is not so profitable on land which has been under *somá* for some time.

The Thal.

At the north of the district and removed from the rivers lies the high sandy table-land called the Thal, which is at present beyond the reach of canal water. This tract consists of sandhills of varying dimensions with strips of hard land known as *laks* or *pattís* intervening. The land in the *laks* or *pattís* is generally good and is cultivated with the help of wells. The rest of the land is all unculturable sand, but grows some trees like *jál* (*Salvadora oleoides*) and bushes like the *lána* (*Snaeda multiflora*), the *phog* (*Calligonum convolvulaceum*) and *kari* (*Capparis aphylla*, or leafless caper). In the *laks* and particularly on wells are visible larger trees of *ukáhn* (*Tamarix orientalis*) and *kandá* (*Prosopis specigera*). The *kandá* in this circle is a large tree unlike the *kandá* (or *jand*) tree in other parts. The reason is that these trees are regularly pruned every year, the loppings forming valuable fodder for sheep and goats. The result is that the trees grow straight and large. Moreover, the trees are carefully preserved for the sake of their valuable leaves. The height of the *kandá* tree is generally 30 or 40 feet, and the girth is sometimes as much as 10 feet. Water is very scarce in the Thal, and the rainfall is uncertain; so there must be a well wherever there is cultivation. It does sometimes happen that, in consequence of good and timely rain, crops are sown and raised without any help whatever from the wells; but the land, nevertheless, either belongs to a well which has been out of use for some time in consequence of the poverty of the

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landowners or adjoins the area attached to a working well, and is cultivated by the occupants of that well. The system of agriculture in this circle is very economic. Indeed it is far more economic than the system in any other circle of the *tahsil*. It is the necessity of attaching great value to water and manure which makes the people so careful in farming. First of all, unless the land attached to a well is owned by one person or is cultivated jointly, it is invariably divided into a number of blocks according to the number of shareholders. This division is a permanent one, although it is made merely for purposes of cultivation and the proprietary holding is kept joint. Every shareholder cultivates his share and sticks to it, so much so that if one of the co-sharers absents himself leaving his land unattended, none of the remaining co-sharers will think of ploughing up one yard of land out of the absentee's share. The nature of soil in the Thal is such that it is simply impossible to grow a crop without manuring the land. Before therefore thinking of cultivating land, a person has to make arrangements to keep cattle on the well. What is generally done is to keep a flock of sheep and goats, whether they belong to the proprietor, the cultivator himself, or to a third person. If the flock belongs to a third person, he is allowed to graze the sheep and goats free in the pasture around the well, and is paid one-quarter sér of grain per diem for every score of sheep and goats. The total expenditure on fees paid for manure is supposed to equal the quantity of grain required as seed, which is from 30 sérs to a maund per *bigah* (half acre). Sheep manure is considered very powerful, and is very carefully laid out in the fields before and after ploughing. The litter from cows and bullocks is also utilized, and on some wells camels are kept for purposes of collecting manure. Where camels are kept, the proprietor of a well has to allow them to graze on the *lána* or *jál*, or whatever bushes or trees may have been preserved around the well, in return for which the camels sit in his land at night. This has a double advantage—(1) that the litter is collected in the fields, and (2) that the camels break up the land with their knees and the soil becomes finely powdered by the time it has to be ploughed. The camel owners have to pay Rs. 6 per hundred camels per month to the proprietor of the well as watering fee. If rain falls in time, the people take advantage of it for ploughing up the lands, but if there is no rain, then the land has to be watered in small bits before ploughing (the process is called *rauni*). The seed of wheat, which is the principal crop of the Thal, is scattered about and not ploughed into the land by means of *náli* (drill). The average depth of water in the Thal is 26 feet. This is not large for a sandy desert like the Thal, but the reason of the water being somewhat nearer than might be expected is that there are two rivers, one on each side of the district, which largely affect the water level of the lands all through. Each well is generally supposed to have four pairs of bulocks. On wells which are owned by well-to-do people they

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Agriculture
The Thal.

sometimes have as many as six pairs, and on some wells where people are poor, they cannot afford to keep more than two pairs. The extent of cultivation varies with the number of bullocks. Where there are four pairs or more, the well is supposed to work day and night. Then the wells are sweet and brackish (*shor*). The water in the Thal has throughout some salt in it, but the quantity in the so-called sweet wells is so small that it does no harm to the crops, and it is possible to grow *rabi* as well as *kharíf* on them. On the *shor* wells, however, it is not possible to grow anything but wheat, no *kharíf* being possible. Indeed even turnips will not grow. The wheat grown is also very inferior, in years of good rainfall, however, the *shor* wells are supposed to yield far better wheat and in much larger quantities than the sweet wells. On the *shor* wells the people generally grow wheat alone, and after the crop has been harvested, they leave their wells and migrate for the summer to other parts, generally to some Bet, to feed their cattle. Even in winter they have in some cases to bring drinking water on donkeys from large distances, as the water of the wells is too bitter to drink, and acts as a purgative if taken. As a rule, the water is very bitter when the well begins to work, but improves when the well has been worked for some time. The soil being sandy, great care has to be taken in laying water on to the fields. The aqueducts are V shaped, pointed at the bottom, and are carefully levelled, so that even small quantities of water can flow on to the fields. These aqueducts are plastered over with good clay and straw to prevent water being absorbed by sand. They are kept in excellent repair, and not unfrequently a man sees rags tucked in, to prevent leakage. The fields are also divided into small beds, generally three yards by two yards in size, where the soil is inferior, and up to six yards by two yards where the soil is good, and a man has constantly to be on the watch when water is being laid on, to turn the water from one bed to another. The idea is that inferior land should not get too much water at one time. A very notable feature of this circle is that patches of cultivation are distinguished from a distance by means of large trees growing on the wells, for among the sand-hills it is only on a well that one can expect to see a large tree. Rain is indispensible for this circle. Nowhere can a good crop be grown without the help of rain, whether the wells be sweet or brackish. It is not only that well water is insufficient to water a large tract of land, but since successful cultivation depends so much on manure and the cultivation on the wells cannot possibly supply fodder for the cattle that have to be maintained on each well, the question whether there will be good fodder in the jungle is a matter of great concern to the cultivator. With rain, the Thal is a paradise for the cattle owners. Beautiful grass springs up in all the strips and belts of low-lying land and leaves nothing to be desired so far as cattle are concerned. But in years of drought

the grass dries up, there is no fodder for the cattle, which must either perish or be taken down to one of the rivers for grazing purposes, thus depriving the wells of the most essential element of farming,—the manure. A cultivator no doubt tries to grow a crop somehow even in the absence of rain, but the outturn is only nominal.

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Agriculture
The Tahl.

In the tract with brackish water, it is not possible to grow any *kharíf* unless there has been an unusually good fall of rain. In the remaining portion only a little *jowár* is grown for the bullocks, the ears being generally lopped and the grain eaten by the cultivators. Sometimes a little cotton is also raised on each well. The *rabi* harvest begins invariably with turnips for the well bullocks. Then comes wheat which is the staple crop of the tract. The wells are scattered about the sandy desert.

Soils.

The following are the chief distinctions of soil according to the quality of land, *i.e.*, its composition: (1) *Milk*, (2) *Gas*, (3) *darh*, (4) *dramman*, (5) *rug*, and (6) *Retli*.

Milk is the name applied to high class land which consists of a rich, soft and friable loam, is highly manured and produces the best crops. *Milk* is found in the canal-irrigated tract mostly roundabout towns and villages. It is supposed to be very sweet, and absorbs and retains moisture. It is also found in portions of the riverain tract. *Gas* is soft land consisting of a good loam with a quantity of sand which makes it easy to break up and favourable for the growth of crops (except rice) with a copious supply of water. This class of land abounds in the riverain tract. *Darh* is peculiar soil, very hard when dry, but soft as cotton when wet. It consists of stiff clay with no sand in it, and is very difficult to plough, when dry. It is manageable only when watered, and as it dries, the surface gets cut up and forms into large and hard clods, which make the fields too rough even for cattle to tread. There are three classes of *darh*, (1) sweet *darh* or *darh* proper, (2) bitter *darh* or *rappar*, and (3) salt *darh* or *kalarási* (also known as *shór*). In the southern half of the district the term *rappar* is used indiscriminately for all kinds of *darh*. *Darh* is considered favourable for all crops except indigo, and is particularly good for growing sugarcane. *Rappar* is good for rice, and will grow wheat, gram and some cotton, with plentiful irrigation, but on the whole it is not profitable. A local proverb describes the esteem in which it is held:—

"*Rappar raháwan maghaz khapáwan.*"
"To cultivate *rappar* is to waste the brain."

Kalarási is distinctly unfavourable for all crops. It is only possible to grow some *sánwak* or inferior rice on it, and in that too, the outturn is very poor. *Dramman* is a thin stratum of clay lying on sand. This class of land is seen in the riverain tract and also inland. Where the stratum of clay is very thin, it is termed *tapli*. On *tapli* land it is hardly possible to grow any-

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thing but the most inferior crops, but where the stratum is thicker, say about a foot or so, good wheat, indigo and other crops can be raised with sufficient moisture. The sand at the bottom of the clay si unable to retain water ; so unless the land has the advantage of *sailáb*, it requires constant watering. Only those crops can grow on *dramman* land which have short roots. Some varieties of *dramman* peculiar to the Indus riverain are:*trappar*, *jil*, *khangráli*, *sar* and *udrá*. *Trappar* is low land which always retains moisture, and has about two feet of loam lying over sand. The outturn on such land is very poor. A kind of short grass grows on it, which is eaten only by sheep and goats. *Jil* is very low land which has too much moisture. Crops sown accordingly turn red, and cannot generally ripen. The only thing that grows on this class of land is *mattar* (peas). *Khangráli* consists of hard black clay mixed with a little sand which dries up very soon and cuts up the hoofs of bullocks. It requires constant irrigation in order to raise a successful crop. *Sar* is similar to *khangráli* with no sand at all. It breaks up in very large clods, and becomes inaccessible to man or bullock. Seed is scattered about in such land without ploughing. *Udrá* is the name given to high sandy pieces of land adjoining the river bank which cannot be flooded. Wheat and *báira* can be raised on *udrá* land with the help of a *jhallár*. In the southern half of the district *dramman* land is called *rug*. But in the Sinawan tahsil the term *rug* means sandy land in which the proportion of sand exceeds that of clay. This description of land is found on the skirts of the Thal. *Rug* is of two kinds, *mitha* (sweet) *rug* which is brown in colour and is favourable for all crops, and *kaura* (bitter) *rug* which has an admixture of salt in it, is darker in colour and can grow wheat and barley alone. This class of land has a stratum of light clay four or five feet deep placed over sand. With canal water *rug* grows good indigo and *moth*. *Retli* is land in which the quantity of sand largely exceeds that of clay. The land in the Thal is mostly of this kind. To an outsider the soil in the Thal looks quite uniform, but there are, no doubt, peculiarities which distinguish land in one place from that in another. The Thal is supposed to be divided into two strips running north and south. One touches the Rangpur sub-tahsil on the east and extends as far as the rakh called Thalwáli which takes up the central portion of the Thal right through from north to south. The other strip is that to the west of the rakh. The land in the eastern strip is called *kaurá so*, and that in the western strip is mostly *mithá so*. These distinctions are based on the quality of water. But with a good rainfall, the crops in *kaurá so* are far superior to those in *mithá so*. The best soil is called *takht*. It consists of a deep and hard layer of good clay which sometimes has a little salt in it. But the effects of this salt (*shor*) disappear when a little sand is taken from the neighbouring sand-hills and mixed up at the time of ploughing the fields. Next comes *sáhal*,

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which is a soil somewhat softer and with a large quantity of salt in it. It requires less water at the time of sowing as also for maturing the crops. Indeed excess of water in this soil destroys the crops. *Lach* is a soil midway between *takht* and *sáhal* and consists generally of plots of either soil mixed up in one place. The worst kind is *dhilli* which has a large quantity of sand mixed up with a soft loam. The soil is not good for wheat, but yields *bájra* and *ussún*. The wild shrubs of *búi* (*Anabasis multiflora* and *panderia pilosa*) which is useless even as fodder, *phog* (*calligonum convolvulaceum*) and *thumma* (*Citrullus colocynthus*) abound in such lands.

The classes of soil adopted for the purposes of assessment and of the preparation of Revenue Records, will be mentioned further on, in Chapter III, Section C.

Agricultural divisions.

With reference to its agricultural operations, the district consists of three parts, a division which is based on the method of irrigation—

1. The riverain tract, depending for its irrigation on the rising of the river assisted in places by wells and *jhallárs*.
2. The canal tract, dependent on inundation canals assisted by wells.
3. The well tract, entirely dependent on wells.

Artificial irrigation— Wells.

The rainfall is so small that practically no crop can be grown on rain alone. The means of artificial irrigation are wells and canals. Wells are of two kinds: those lined with masonry (*pakka khúh*) and those lined with either logs or wattles, which are called *kharoras*. A well lined with logs is called *ghat da kharora*, a well lined with wattles is called *lai da kharora*, because the wattles are made from the *lai* bush (*Tamarix dioica*). No wells are unlined with either masonry, timber or wattles. The soil is so fine that unlined wells cannot be made. The wells are all worked by the Persian-wheel. Persian-wheels (*jhallár*) are also erected on the banks of canals, rivers and tanks. No wells are deeper than 40 feet. The depth is very uniform, varying only from nine to 12 feet in the greater part of the district. The depth is least in the south of the district and on the banks of the rivers. In the *thal* the depth is greatest, and averages 24 feet. A well lined with masonry costs from Rs. 250 to Rs. 400, a well lined with timber about Rs. 100, a well lined with wattles Rs. 25 to Rs. 90, and a *jhallár* lined with masonry Rs. 50 to Rs. 100. As a rule, four pairs of bullocks are used per well. The gear of a Persian-wheel costs about Rs. 50, if made of *tahli* (sissoo) or Rs. 40 if made of *ukanh* (Tamarisk). In this district a well unassisted by other sources of irrigation irrigates about 15 acres, but a well assisted by *sailab*, or by canal, is supposed to irrigate up to 50

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acres. This is, however, possible if the cultivator be intelligent and hard-working, or if the shareholders are united; otherwise

"*Aklún bájh khuh khálí.*"
"Without wisdom the well is empty."

Canals.

Canal irrigation is either by flow from a water-course, called Paggu (the cut being called Tukka) or by lift, *i.e.*, by means of a *jhallár* (Persian-wheel) put up on a water-course and in a few cases an old canal.

Agricultural implements and appliances.

To cultivate a small holding, say of 15 acres, two yokes of oxen are required, costing at the least Rs. 60 or Rs. 80 per pair. The wood-work of a well, if made of *kikkar* or *farásh*, would cost about Rs. 40, if of *shísham*, Rs. 50 or Rs. 60. The well ropes and pots, which require frequent renewal, cost about Rs. 10 a year. The other implements would be one or two ploughs, one or two yokes (*panjálí*,) a drill (*náli*), one or two rakes (*jandra*), a wooden roller (here called *malha or merha*), a mattock (*kahí*), a smaller kind of mattock (*wahola*), a sickle (*dátrí*), an axe (*kuhárí*), a pitchfork (*trangal*). The cost of these tools would be about Rs. 10 to Rs. 12. The value of the well, wood-work, bullocks, and ordinary implements together would be about Rs. 150. It should, however, be added that the cost to a villager of these implements would be much less, as he would probably get the wood from the village wastes, and the village blacksmith and carpenter would be recompensed, not in money, but by a payment of grain at harvest. The implements used in the manufacture of indigo and sugarcane will be described further on.

Rotation of crops and fallows.

In the alluvial tract no rotation is observed, nor is it necessary. The strength of the soil is renewed every year by the deposit which the rivers bring down. In the canal and well country the necessity of changing the crop is thoroughly understood. The general practice is to divide each estate into two parts. In one part, *kharíf* crops are sown, in the other *rabi*. The following year, *kharíf* crops are sown in last year's *rabi* half, and *rabi* crops in last year's *kharíf* half. This alternation is called *dúpar*. There are exceptions to this rule, especially in the richer lands and where manure is abundant. In sugarcane lands the rotation is generally turnips, sugarcane, indigo and wheat. These lands are always under crop, and the strength of the soil is maintained by heavy manuring. Wheat and barley are believed to do well after indigo and rice and peas or gram are generally raised off the rice fields. Wheat, cotton or melons thrive after sugarcane. *Juár*, *bájra*, *moth*, *múng* and *másh* do well after wheat and barley. The five *kharíf* crops just mentioned are usually the end of a series of crops. After any of them the soil is considered to be exhausted, and to require renewal by manure and constant ploughing. The people appreciate repeated ploughings as a restorative. Their expression is that the mouth of the soil is opened by the ploughs, and attracts the sun and moon. In the richer parts, the land is

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never allowed to lie fallow. Where manure is scarce, land is cultivated every alternate year. The soil called *dramman*, which is easily exhausted, is sometimes allowed two or three years' rest between every two crops. All rules of rotation and fallows are liable to be broken if the canal-running season is prolonged. Like inundation-water, canal-water is so rich in silt that it manures as well as irrigates.

Manures.

The alluvial tract is never manured. The deposit renews its strength. In only one case is inundation hurtful; that is, when the flood deposits its silt on the land nearest the river bank, and as it finds its way inland, flows over land impregnated with salt which it imbibes. When in this state it is called *kála pání*. In the remainder of the district the use of manure is general. The manures in use are—

1. Farm-yard manure.
2. Indigo refuse called *valh*.
3. Clay from the canal spoil banks.
4. Sand from the *thal* sandhills.

The two last kinds are known as *pana*. Manure is applied by being worked into the soil. Cattle are tied in lines called *dhára*. Sheep and goats are penned on it. In the *thal* a fee of a quarter of a ser of grain will procure the services of a score of goats and sheep for a long winter-night. The fee is called *ahalí*. Manure is pulverized and applied by top-dressing to growing crops. In this state it is called *chhána*. It is applied by handfuls to young plants. The name for this is *chungí devan*.

Sowing and harvest times.

There are two harvests *kharíf* (autumn) and *rabi* (spring). Ploughings for the *kharíf* begin in January when lands cleared of turnips are prepared for sugarcane. The greater part of the *kharíf* ploughings and sowings take place in Jeth and Hár (May to July). Indigo is generally cut in August and all other crops are off the ground by the end of November or middle of December, except sugarcane which lasts till the end of January. Land begins to be ploughed up for *rabi* in September. Sowings commonce in October, go on till the end of November, and sometimes even later. The *rabi* begins to be harvested in January or February when turnips are used up. Peas, gram and similar crops are cleared in February and March; but the real *rabi* harvesting begins on Baisakhi (about 15th April) when the most important crop of wheat is taken in hand. Melons also included in *rabi* are not gathered till June and July.

Population engaged in and dependent on agriculture.

Table XVII shows that out of the total population of 405,656 persons registered in 1901, 217,240 or nearly 54 per cent., were landlords, tenants or their dependents. All classes of residents of the district possess more or less land. An account of the tribes will be given further on.

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Agriculture
Agricultural labourers.

Table XVII shows that in 1901 there were 18,343 agricultural labourers or their dependents,—2,383 persons engaged in the manufacture of tools and machinery or of iron, most of them probably being village *lohárs* (blacksmiths) preparing and mending the agricultural implements, 5,170 potters, and 4,912 carpenters. Most of these artisans depend upon agriculture. Of the 9,442 persons returned as connected with leather, bones and horns, it is difficult to tell how many are village *mochis* (cobblers) and how many village *chuhras* selling bones as a byeproduct. Taking about two-thirds of these as village labourers, it would not be going far wide of the mark to assume that the number of agricultural labourers is about 36,000 or 9 per cent. of the total population.

Farm servants and labourers.

Farm servants, here called *ráhak*, are usually hired by the year, *i.e.*, from the beginning of Hárh to the end of Jeth. They are sometimes hired by the half-year. The wages of a farm labourer consist of four parts:—

Khadh, or diet	From 1 to 1½ maund per month.
Kirhion	Cash at 8 annas per month.
Bijrai	A present at sowing and harvest.
Varsa	A present of from 2½ to 3 maunds in a lump.

Clothes are sometimes given. The *ráhak* also gets fodder for one animal, and a share in the greens cooked for the master's family. He accompanies the family on pilgrimages and gets fed going and returning. The pay of a *ráhak* cannot be less than Rs. 7 or 8 a month.

The persons employed as farm servants do not belong to any particular class; where there is a family of several sons, some will stay at home and cultivate the family land, while the others go out as farm servants. People of all castes become labourers. Many of the "proprietors" and "tenants" are also field labourers; "sweepers," washermen" and "weavers" also supply a number of field labourers. It cannot be said that field labourers are in a condition distinctly inferior to that of the poorer agriculturists who cultivate holdings of their own; those hired by the year or by the half-year are paid monthly, and have no need of an account with a village trader. The poorer agriculturists often go out as field labourers merely to get rid of the recurring responsibility of paying the land revenue, and put a tenant who will pay it, in possession of their land to cultivate for a time. Those field labourers that are hired for the job, as winnowers, cotton-pickers, reapers and indigo-churners, are paid at once, and have no need to go to the village trader. On the whole, the field labourer is better off than the poorer agriculturists.

Day labourers

The class of day labourers is composed mainly of wandering families of Pathans, temporary immigrants from Khurásán or *Marechas* who come from Bikaner. The Pathans called Powindahs enter the district at the beginning of the cold season, and having stayed on through the winter and the *rabí* harvest, return to their

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homes for the summer. Such labourers are generally paid in cash according to the amount of work done by them. The local day labourer gets from two to four annas a day in the villages and four to six annas a day in the towns. Skilled workmen get up to Re. 1 a day.

Menials.

The following menials are usually paid from the common heap :—*tarkhán* (carpenter), *kumhár* (potter), *lohár* (blacksmith), *chháji* (winnower), *kutána* (rope-maker), *rákha* (watchman), *dubír* (weighman), and *kotwál*. The carpenter and blacksmith repair the ploughs and well gear and receive their dues on all classes of land. The potter supplies earthen pots for the wells and *jhallárs*, and the *kutána* the ropes for the well gear; and they receive their dues on all classes of land except *nahri* and *sailáb*. The winnower is a necessity everywhere, so is the weighman. The watchman, who is responsible for preventing loss of produce by unfair means, and the *kotwál*, who has the grain cleaned and sealed, are not employed by everybody. In the riverain and *cháhi-sailáb* tracts the carpenter and potter get four *topás* for every *páth* or $\frac{1}{64}$th each, out of wheat and barley. The blacksmith and *kutána* are paid at half this rate. In the canal-irrigated tract and Thal the carpenter and potter get five *topás* and six *topás* per *páth*, *i.e.*, $\frac{5}{256}$ths and $\frac{3}{128}$ths respectively, the blacksmith being paid at half these rates and the *kutána* at two *topás* per *páth*. The carpenter, blacksmith and potter get *jowár*, *bájra*, and rice in *kharíf* at one-fourth the rate at which they are paid in *rabi*. The winnower gets six *topás* per *páth* or $\frac{3}{128}$ths of every kind of grain that he winnows, and the rate is the same all over the district. The weighman receives two *topás* per *páth*, or $\frac{1}{128}$th out of wheat and barley in *rabi* and does his work without payment in the *kharíf*. The watchman and *kotwál* are usually paid at two *topás* a *páth*, but they are not employed by nearly half the zamíndárs. Besides these menials, *gahera* is employed for threshing wheat and barley. His duty is to drive the bullocks at the threshing. He gets his food and is given *pai páth*, or $\frac{1}{64}$th of the produce. The smaller cultivators do not, however, employ him when they can manage without his help.

Another labourer employed is the *laihár* (reaper), who sickles wheat and barley. Every cultivator wants to finish his harvesting operations as quickly as possible. The labourers take advantage of the demand, and although the customary share is $\frac{1}{40}$th, or one handful to every 40 handfuls cut, they insist upon getting as much as $\frac{1}{16}$th, or being allowed to pick up a choice handful, which they take good care to make as big as three of the ordinary ones. The Mullán and Brahman have to be paid one *topá* a *páth* out of wheat and barley before the common heap can be touched. Usually only one of them is paid, but in some cases both are equally respected and get their dues.

The expenses incidental to the collection of cotton and the manufacture of indigo and *gur* (consolidated sugarcane juice) are

CHAP. II, A.
Agriculture
Menials.

these. Women are employed on picking cotton, and are supposed to be given $\frac{1}{12}$th of the cotton they collect when the crop is in full bloom, and as much as $\frac{1}{4}$th when the produce is small and the labour less productive. The produce is, however, not weighed, and the women are allowed to take a handful, which is supposed to represent the customary share. As a matter of fact, however, they take much more than is supposed to be their due. The carpenter and potter are given two *sers* of cotton for every yoke of oxen, the former getting his dues from all classes of land and the latter on all classes except *nahri* and *sailáb*. About $\frac{1}{6}$th of the gross outturn of cotton is lost in these expenses. The indigo crop has to be cut and carried to the vats. This work is generally done by labourers, as the cultivators are busy at the time in ploughing up fields for the *rabi*. The labourers are paid two annas for cutting, and two annas for carrying enough stalks to fill up two indigo vats, called a *jori*. But sometimes the tenant himself does this work. The *valora* (churner) receives from Rs. 6 to Rs. 12 per month, and prepares one *jori* a day. Much depends upon the skill of this workman, and the quality and quantity of the outturn varies with the care and experience of the churner. Besides his pay he gets a little *ghi*, oil and tobacco every day, and is given a piece of cloth for use when working at the vats. These expenses may be reckoned at one anna per *jori*. The total expense per *jori* thus amounts to six annas. Taking the outturn of each *jori* to be valued at Rs. 2-4-0, the expenses amount to one-sixth of the produce. Very few iron cane presses are used in this district. The expenses connected with the old wooden sugarcane press are numerous, and the cost of production of *gur* with this machine is admittedly no less than one-third of the total produce.

Principal crops.

The staple food grains of the district are *jowár*, *bájra* and wheat. The proportion of *kharíf* and *rabi* crops is :—*kharíf* 30, *rabi* 70. The average area under each of the important crops matured on an average of five years was ascertained at the recent settelment to be as follow :—

CROP.	Area.	Percentage.	CROP.	Area.	Percentage.
Rice	38,034	8·31	Brought forward ...		
Jowár	13,646	2·98	Barley	10,837	2·37
Bajra	18,307	4·00	Gram	16,118	3·52
Moth	7,425	1·62	Massar	6,589	1·44
Sanwak	1,244	·27	Peas	19,112	4·18
Samukha	52	·01	Sarshaf and Ussún ...	8,063	1·76
Til	4,694	1·03	Tobacco	1,225	·27
Chillies	152	·03	Methra	3,685	·81
Sugarcane	4,187	·92	Other	8,723	1·91
Cotton	18,062	3·95	Fodder	41,832	9·14
Indigo	19,181	4·19	Vegetable	1,954	·43
Wheat	213,559	46·68	Fruits	834	·18
Carried over ...			TOTAL ...	457,515	100

CHAP. II.A.
Agriculture
Kharif crops:
Cotton.

Cotton is grown in every part of the district except the inundated lands. The land is prepared in February and March. Five to seven ploughings are given and the clod-crusher is dragged over the ground after each ploughing. The seed is prepared by being rubbed in cow-dung, and then dried. The best time for sowing is April. The seed is sown broadcast, and after being ploughed up, the land is divided into beds of a suitable size for irrigation. Two waterings are then given at short intervals. When the young plants are about two feet high, a plough is driven lightly among them to loosen the soil. The cotton ripens at the end of September, and picking goes on from then till December. Cotton is picked by women every eighth day. Their share is called *bhanjí*. The first cotton-picking is called *láwin pheran*, and each picking is called an *oá*. Four to eight sers of seed are sown to the acre. The enemies of the cotton crop are *múlá*, a blight that begins at the stem and spreads over the plant, the soil becoming water-logged (*soma*), and a red worm that attacks the cotton in the pod. The boll-worm discovered recently also does much damage.

Indigo.

Indigo grows in the richest soil as well as on light sandy lands. The land is prepared in February and March, and the seed is sown from March 15th to May 15th. Indigo is usually sown every year, but it is possible to get crops for three years off the same plants. In its first year it is called *rop*, in the second *mundhi*, and in the third *trundhi*. Indigo is ready for cutting from July 15th to September 15th. It is in its prime when it has been from 12 to 15 days in flower. If the flowers fade and become yellow before it is cut, the outturn will be small. It is cut in the morning and carried in bundles to the vats, where it remains till the afternoon. Then the churner (*vilora*) comes and puts the indigo into the vats, and weighs it down with heavy logs of wood. Water is turned on, and the vats are filled two-thirds full. The vats are in sets of three, two large and one small. A set of vats is called a *jori*, and a number of sets together, a *khárha* or *akhárha*. When one watch of the night remains, the indigo has been sufficiently steeped. The churner takes out the plants, and, with a churning-stick called *madháni*, churns the water for about two hours. The sediment is allowed to sink to the bottom of the vat, and the water is run off. The sediment is then placed in the small vat, and is allowed to settle again. Then the water is run off a second time. The sediment is removed, and made into cakes called *gíti*, and dried. At each churning a pair of vats produce from $1\frac{1}{2}$ to 3 sers of indigo. The preparation of the indigo is most carelessly done. The indigo is soaked in muddy water from a canal. While the cakes are drying, no precautions are taken to prevent sand and earth being mixed with the indigo, and some people deliberately mix sand with the indigo. The consequence is that, though this

CHAP. II, A. Agriculture. Indigo.

district should produce better indigo than Bengal, because there is little rain, which is the curse of the Bengal planter, Muzaffargarh indigo sells at less than half the price of the Bengal indigo. If indigo is grown for seed, it ripens in November and December. Sixteen sers of seed are sown to the acre. The stalks and leaves, after being taken out of the vats, are called *valh*, and form a valuable manure.

Jowár.

Jowár is sown for fodder in March and April, and for grain in July and August, but in the *thal* a second sowing is made for fodder in July. The grain ripens in October, and, while ripening, is protected from birds by men on high platforms with slings and crackers. The ripe ears are cut off and threshed. A maund of seed is sown to the acre.

Bájrá.

Bájrá is sown from July 15th to August 15th. It is protected while ripening like *jowár*. When the ears are ripe, they are cut off, and the stalk is left standing. The stalks of *bájrá* are never cut and stored for fodder like *jowár*, but are left standing for the cattle to eat, and great waste is the result. Eight sers of seed are sown to the acre.

Rice.

Rice is sown from 15th April to 15th May in nurseries, which are manured a hand-breadth deep with ashes, or finely pulverized manure (*páh*), and which are very carefully watched and weeded till the seedlings grow about eight inches high, which they become in a month. The seedlings called *bijara* are planted out at the distance of a *hath* (foot-and-a-half) from one another in well prepared land in which water is standing. This water is allowed to dry up once, but after that the plants are kept submerged. Rice is one of the few crops which is carefully weeded. It ripens from August to October. The grain is extracted by the sheaves being beaten against a log or a bank of prepared clay. It is firmly believed in the south of the district that if any calamity happen to a rice crop it will turn into *samúka*.

Sugarcane.

Sugarcane is grown in every part of the district except the *thal* and the inundated tracts, but, as it requires capital and abundant manure, it is mostly found in the neighbourhood of towns. The selection of land for the next year's sugarcane is generally made from fields which have just borne wheat. Beginning from May, the land is ploughed from four to five times during the summer. After each ploughing the land is rolled and levelled. It is then heavily manured. Between September and January a crop of turnips is taken off the land. The local theory is, that turnips do not exhaust the land. The truth is that fresh unrotted manure is used, which requires the extra handling and watering caused by raising a crop of turnips to make it sufficiently decomposed to be beneficial for sugarcane. After the turnips have been removed, the ground is ploughed eight times more and rolled. The sugarcane is then sown in February and March. Canes for seed have been stored in

CHAP. II.A Agriculture Sugar cane.

mounds covered with earth called *tig*, since the last year's harvest. These are now opened, and the canes are cut into pieces with one or two knots in each. A plough, which has a brick fastened across the sole to make a wide furrow, is driven through the ground. A man follows, who places the pieces of sugarcane continuously in the furrow, presses them down with his feet, and covers them with earth. Then a log of wood called *ghíal* is dragged over the field. After planting the only care which sugarcane requires is constant watering and hoeing. Judging from the accounts of other countries, hoeing is not done often enough. Two hoeings are considered sufficient. Sugarcane is cut and crushed from the end of November to the end of January. The double-roller wooden crusher is still used in places, although it has been replaced generally by the iron crusher. The following are some of the notable points in the working of the wooden crusher. There are ten attendants on the crusher and *gur*-boiler. The crusher is worked from midnight to 10 A.M. This time is chosen as less severe on the animals than the day, and also because fewer visitors come at this time, it being *de rigueur* to give every caller as much juice and cane as he can eat, drink and carry away. It is very difficult to estimate the net profits of growing sugarcane. Each owner extracts his own juice, and makes his own *gur*. The wages of the workmen are paid in every possible form. For instance, the *dhora*, or man who puts the canes into the crusher, gets one blanket and a pair of shoes; when crushing begins, a quarter of a ser of *gur* and a *chhiták* of tobacco per day, Rs. 4 and four sers of *gur* per month; a present of from Re. 1 to Rs. 2 when the work is finished, and fifteen sers of wheat under the name of *bijráí*. Then, again, some attendants are paid by the *kachcha* month, and some by the *pakka* month. A *kachcha* month is a calendar month. A *pakka* month is when a sugar-crusher has been worked thirty times, and each time has extracted ten maunds of *gur*. A *pakka* month may occupy two calendar months or more. We get into more certain ground, when the owner of the cane has no sugar-crusher. He pays the owner of the crusher one-third of the outturn of *gur*, the owner of the crusher supplying all attendants and animals required for working it.

Moth.

Moth is grown only on canal-irrigated lands, especially in the *thal*. If intended for grain, *moth* is sown in June and July; if for fodder, it is sown in August. A single ploughing is considered enough for *moth*.

Til.

Til is sown in August, chiefly on *sailába* lands. One, or at most two, ploughings are considered enough. *Til* ripens in November. The crop will thrive on any soil except *shor* or *retli*, but it is generally grown on light soil and requires very little moisture.

CHAP. II. A.
Agriculture
Sámuká.

Sámuká is a *kharíf* crop that deserves mention from the mode of its cultivation. As the rivers recede in August and September, they leave large flats of quick-sand, or rather quick-mud, which will not support a man. The sower, taking a *ghara* of seed, enters the mud, supporting himself on the *ghara* and scatters the seed over the mud. As the mud dries, the plant springs up and produces grain in October. The grain is small and inferior. Kirárs eat it on fasting-days. The straw is considered excellent fodder.

Rabi crops: Wheat.

Wheat is grown in every part of the district. The land is ploughed seven times. On the banks of the rivers, if the alluvial deposit be friable and soft, one or two ploughings are considered enough. The fifteenth of Kátik, which corresponds to the end of October, is the day for beginning to sow wheat, and sowing should be over by the fifteenth of Manghir or the end of November, though in practice it continues throughout December. The seed is sown broadcast (*chhattá*) in the *thal.* Fields are ploughed after being watered (*rauni*), and if they do not dry up till the sowing, seed is scattered and the land ploughed and rolled. It is not watered till the sprouts are out of the ground. This is called *pakká chhattá.* But if the moisture dries up before sowing, the fields are watered after scattering the seed. This is called *kúr chhatt.* On alluvial lands and other heavy soil, seed is sown with the drill when there is moisture in the land, and then the field is not watered until the sprouts are out. But when the land has no moisture, the method of *kúr chhatt* is adopted. Sowing with the drill is supposed to be surer and more productive.

The essentials for a good crop of wheat are popularly considered to be—

1. Sowing in Kátik.
2. Watering in Poh.
3. Top-dressing in Manghir.

An early crop is called *jethi*, and one sown late is termed *kanjhí.* Wheat is watered from three to nine times. The number of waterings depends on the kind of soil, and on the weather. Green wheat is largely used for fodder, and while the grains are tender, the ears are roasted and eaten by human beings. The name of wheat so prepared is *ábhún.* Wheat is liable to be attacked by the following diseases or blights :—

Dhanak.—In March and April the grains shrivel up, and become curved and black.

Kání, or smut.—The grains become black, and turn to a substance like ashes.

Rattí, literally redness.—The whole plant becomes yellow and shrivelled. It is said to be caused by extreme cold.

Jhallá, a hot westerly wind that scorches up the crop.

CHAP. II.A.
Agriculture
Rabi crops
Wheat.

The weeds noxious to wheat are *bhúkal, jaudal, jawánh* or camel-thorn, and the thistles called *lehú* and *kandiárí*. The day for beginning to reap wheat is the first of Baisákh, about April 12th. Harvesting operations however begin a week or ten days earlier in the *thal* and a week later in the riverain tracts. Reapers are called *láíhár*, and their wage is *láí* or *láví*, nominally one sheaf in every forty. But the reapers scheme to make their sheaves large, and their share amounts to about $\frac{1}{16}$th of the crop. Each day's reaping is carried in the evening to the threshing-floor called *pír* or *bhajar*, and in the north *khalwára*, and is trodden out by oxen tied to a stake in the centre. The action of the oxen is helped by a heavy log called *phalla*, being dragged by them as they move round. The cultivators rarely winnow their own wheat. They engage *kurtánas, mochís* and *chuhrás* to do it, and will sit still and see the corn and straw destroyed by rain rather than winnow themselves, if a winnower cannot be obtained. The heap of cleaned corn is called in the north *dherí*, and in the south, *bár*. It is divided among the various claimants, and as the cultivator has postponed paying his bills till harvest time, he appropriately uses the proverb.

Bár cháwán te Kiámat áwan.
Dividing a heap of corn is as bad as the Judgment Day.

Kinds of wheat grown.

Wheat is divided into *kinjharí*, or bearded, and *rodí* or beardless (literally bald); and into red and white. Other kinds are:—*pamman*, of which the grains are longer and thicker than any other kind. It is cultivated as a luxury, and used for parching, for making the edible called *ghunghnián*, and vermicelli. *Mendhiánwáli* or *daudí*, of which the ear is small and curved. The grains are small, white and curved. It is so named because the grains being close set are supposed to resemble the plaits of a girl's hair. *Guddi* is similar to *pamman* but has a shorter grain. *Mauratánwáli* has a ruddy brown grain and *nimani* produces a short white grain. If the sowing is early, *i.e.*, in Katik, six *páís*, which equal one maund of seed, are sown to the acre. If the sowing is late, *i. e.*, in Manghir and Poh, eight *páís*, which equal one maund twelve sers, are sown to the acre. The amount of seed required is less in drill than in broadcast sowing.

Amount of seed.

Barley.

The cultivation of barley closely resembles that of wheat. In the south of the district a large-eared purple-grained species is grown which is called *indarjau*. This is a different plant from the *indarjau* of Stewart's Panjáb Plants, page 142. It is grown as a delicacy, and is chiefly used for parching.

Peas

Peas are sown on *sailába* land in October and November. One or two ploughings are considered enough. They are used as fodder, and the green pods are roasted and eaten under the name of *dadhrián* and *ámián*. When ripe, they are used for *dál*, or ground and made into bread. Peas that grow up of themselves

CHAP. II, A. Agriculture. are called *pokhi*. To sleep in a pea field is believed to produce a kind of paralysis called *manda* and a diet of peas causes the disease known as *wá*. Pea bread is considered very satisfying. A quarter of a ser of pea bread will satisfy a man to the extent of inducing sleep. From 20 to 30 sers are sown to the acre.

Gram. Gram is sown on *sailába* land during October. One or two ploughings are sufficient. The seed is sown broadcast. The young leaves are known as *phallí*. They have a pleasant acid taste, and are eaten as a vegetable. Gram ripens in April. The pods are roasted and eaten under the name of *ámin* and *dhadhrí*. *Amin*, plural *ámíán*, is used in the north, *dhadrí* in the south. *Amín* is said to be derived from *ham chunínbád* "may it be like this," because gram ripens first of the *rabí* crops. Ten sers are sown to the acre.

Turnips. As already described under sugarcane, turnips are sown to prepare the land for a *kharíf* crop. The seed is sown in September, and the turnips are ripe in January. They are mostly used as fodder, and ripen just in time to relieve the failing stocks of other kinds of fodder. The leaves, stalks and roots are eaten as a vegetable, and the root is cut in pieces and dried for summer use. From the seeds is extracted a bitter oil. The plants intended to provide seed for next sowing are prepared in a peculiar way. When the plant is in its prime, the leaves are cut off two inches from the root, and the root is deeply scarified. It is then watered, and sends up a fine flower stalk. The wonder is that the plant survives such ill usage. A turnip prepared in this way for seed is called *dákún gonglún*.

Ussún. *Ussún* is the *táramírá* of the Punjab (*Brassica eruca* or *eruca sativa*). It is sown in September. When sown alone or with *másh*, it is intended that the seed should ripen. When sown with peas or gram, it is intended for fodder. One or two ploughings are sufficient. While green, it is eaten as a vegetable. *Ussún* ripens in March and April. The sheaves are collected on a piece of hard ground and the seed thrashed out with sticks. The oil extracted from the seed is used for burning, anointing, and making sweetmeats. In very hot weather, *ussún* is mixed with bruised barley, and wetted and given as a cooling food to buffaloes. Four sers are sown to the acre. The belief that *methra* seed, when sown after noon, comes up *ussún*, has been mentioned before. A plant of *ussún* is like a turnip which has gone to seed, and *methra* is *Fenugreek*.

Other crops of the *Brassica* order. The other plants of the *Brassica* order cultivated in this district are *arhion* or *ahur* mustard (*Brassica juneca*); *sarhion*, Panjábi *sarron* (*Brassica campestris*); *sathrí*, a plant of the *Brassica* order, which is called *sathrí* because it ripens in *sath* (sixty) days.

CHAP. II.A. Agriculture

Mohrí or mauhri.

Mohrí is *Ervum lens*, Panjábi *masar* and *masúr*. It is sown in *sailába* land at the end of October. It is sown alone and with barley broadcast and in drills. If both *mohrí* and barley are sown broadcast, the *mohrí* is sown first and the barley afterwards. If drill-sowing is chosen, *mohrí* and barley are sown in alternate furrows. Its young leaves like gram are called *phallí*. It ripens in April, and is made into *dál*. It is reckoned a humble valueless crop. A proverb on swaggerers says—

Dál mohrí dí dam puláo dá.

"He is only *mohrí dál* and gives himself the airs of a *puláo*."

It is believed, like *methra*, and *ussún*, that, under certain circumstances *mohrí* turns into a seed called *rári*. Sixteen sers are sown to the acre.

Tobacco.

Tobacco is grown mainly on wells and the sandy soil of the wells on the skirts of the Thal is particularly suited to it. Tobacco grown near Langar serai is supposed to be particularly good. It is sown as an extra *rabi* crop generally on land cleared of turnips. The land has to be well ploughed and manured and the crop has to be watered repeatedly from the well. The leaves when fully grown are cut and thrown in sand to dry.

Average yield.

The average yield of the principal crops is given in the following table :—

1	2	3	4	5	6	7	8	9
Description of cultivation.	Rice.	Jowar.	Bajra.	Moth.	Til.	Chillies.	Sugarcane.	Cotton.
Chahi	Mds. ...	3 to 6	3 to 6	3 and 3½	3 and 3½	Rs. 30	12½	2 and 3
Chahi Nahri ...	10 to 12	4 to 6	4 to 6	3½ and 4	3 and 3½	30	12 to 16	3½ to 4½
Nahri	10 to 14	3½ to 6	3 to 6	3½ and 4	3 and 3½	...	10 to 14	2½ to 5
Abi	10 and 10½	4 to 6	4 to 6	...	3 and 3½	...	10 and 12	3 and 3½
Sailab	9 and 10	3½ to 6	3½ to 6	...	2½ and 3½	...	10	2 and 2½
Chahi Sailab ...	10	...	4 to 6	...	3 and 3½	30	12	3 and 3½

CHAP. II, A.
Agriculture
Average yield.

1	10	11	12	13	14	15	16	17
Description of cultivation.	Indigo.	Wheat.	Barley.	Gram.	Massar.	Peas.	Sarshaf and ussún.	Tobacco.
	Sers.							
Chahi	12	6 to 9	6½ to 9½	3½, 4	4	4, 5	2½ to 3	6 to 10
Chahi Nahri ...	12, 13	8 to 10	9 to 10½	4	4	4, 5	2½ to 3	6 to 10
Nahri	11 to 13	6 and 7	6½ and 7½	4	4	4, 5	2½ to 3	6 to 9
Abi	11, 12	7 to 9½	7½ to 10	5	3 and 5	5, 8	2½ to 3	6 to 9
Sailab	...	5 to 6½	5½ to 7	5 and 5½	2 to 5	5 to 7	2½ to 3	...
Chahi Sailab ...	...	7 to 9	7½ to 9½	5, 5½	5	5, 8	2½ to 3	6 and 9½

Fruits. Dates. Mangoes.

Mangoes and dates are the principal fruit products of the district which are not only largely consumed locally but are also exported in immense quantities. A full description of date trees and their fruit has been given under 'Flora' in Chapter I. Mangoes fruit in Sáwan (middle of July to middle of August), but fruit on some trees begins to ripen in Hár (middle of June to middle of July). Such trees are called *Haru* and are valued for being the first to send fruit into the market. Then again there are trees which fruit late, *i.e.*, in Bhadon (middle of July to middle of August). These trees are called *Bhadri* and their fruit sells at two to four sers per rupee against the harvest price of 8 to 24 sers. Two of the particularly good mango trees are:—*Khira* in Bhutapur and *kafuri* in Khangarh. Muzaffargarh mangoes are known for their thin juice which is less turpentiny than Saharanpore mangoes and not so excessively sweet.

Pomegranates.

Pomegranates are grown largely in the gardens. Those raised in the Alipur gardens are famous and supposed to be very delicious. They are large in size.

Oranges.

The oranges (indigenous) are abundant and are fairly good. No Malta or other oranges have been grafted.

Apples.

Apples (small) called *suf* are hard and sour, but they are much sought after and eaten with or without a little salt.

CHAP. II, A.
Agriculture
Other fruits.

The other fruits grown in gardens are limes and figs.

Vegetables.

Turnips are grown on every well and used as vegetables as well as fodder for bullocks. Besides turnips, the cultivator raises a few onions and melons on every well if he can and radishes, cauliflower, eggplant, gourds, cucumber, chillies, aniseed and coriander are grown on wells adjoining the towns.

Extension in cultivation.

Of the total area of 2,019,887 acres ascertained at the recent settlement 14 per cent. was unculturable, 15 per cent. was included in Government Rakhs, and other waste available for cultivation amounted to 46 per cent. Only 509,685 acres (*i.e.*, rather more than 25 per cent,) were under cultivation. The area cultivated at the first regular settlement was 395,275 acres. It would thus appear that cultivation had increased 29 per cent. But in consequence of a difference in the system of classifying areas, the comparison is fallacious. The main differences are these. At the first regular settlement the area under crops in one of three harvests was recorded as cultivated. All culturable area not cultivated within three harvests being returned as fallow (*jadid*), abandoned (*uftada*) or culturable (*qabil ziráat*), while according to the present system the cultivated area includes the area sown in one of the two harvests of the year and also the *kháli* and *taraddadi* (fallow and ploughed) not sown with a crop for three harvests. It was determined in the last Settlement Report that the correct increase in cultivation was rather more than 14 per cent. The whole of the uncultivated Thal outside the Government Rakhs (representing about 19 per cent. of the total area) has for the purpose of assessment of grazing dues, been returned as waste available for cultivation, although it is impossible to bring it under cultivation with the present sources of irrigation; and a very considerable portion of the waste in the other assessment circles is too impregnated with salts to be really fit for cultivation. The area available for cultivation is therefore much less than 46 per cent. of the total. Cultivation is spreading steadily with the sinking of new wells and the extension of canal irrigation. In regard to the latter source the danger to be guarded against is that the rule of maximum area irrigated with the minimum supply of water may not be pushed too far particularly to the detriment of the old canal irrigated lands which have been assessed in their irrigated capacity.

Improvements in agriculture.

No improvement has been effected in the quality of crops by selection of seed and no new varieties of crops have been introduced. There has, however, been some rise and fall in the popularity of crops. Indigo was till lately considered to be a very paying crop, but the sudden fall in its price and the very considerable falling off in the demand for this commodity have placed the crop under disadvantage and the area sown with it is somewhat on the decline. Cotton was a favourite crop, some time

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ago, but its place is being taken up by rice partly because some of the best cotton growing lands were spoiled by the flood of 1893, and chiefly because rice is much easier to grow with canal water of which the inundation canals yield a fairly plentiful and constant supply. Besides both indigo and cotton have to be sown early and it often happens that the canals are not started in time.

Working of the Land Improvement and Agriculturists Loans Act.

Much attention has been paid in recent years towards meeting the needs of poor agriculturists under the Agriculturists Loans Act and fairly large amounts have been advanced under the Land Improvements Loans Act. In former years the advances made under the Acts were generally small and the agriculturists found it easy and convenient to borrow from the village money-lender. Restriction of credit owing to the passing of the Alienation of Land Act obliges them to look up to Government for help and an attempt is being made to meet their requirements as much as possible. The amounts advanced every year under each Act since 1891-92 are noted in Table XX. The figures speak for themselves. Advances under the Land Improvements Loans Act are taken mostly for sinking new wells. Loans under the Agriculturists Loans Act are needed for purchase of seed and bullocks. The advances taken are repaid with fair promptitude.

Agricultural banks.

No agricultural banks have yet been started in the district. The agricultural population is mainly Muhammadan and the Mullahs have very queer notions about interest. The people are, therefore, very shy of participating in institutions which would in one form or another bring interest and lead ultimately to their ruin in accordance with the tenets of the *Shariat* (Muhammadan Law).

Indebtedness of land-owners.

The following extract from the recent Settlement Report will be found interesting :—

" The alienations made since last settlement are noted below :—

AREA SOLD SINCE LAST SETTLEMENT.

	To Sahukars.		To Others.		Total.		Percentage of area held by Hindus.
	Total.	Cultivated.	Total.	Cultivated.	Total.	Cultivated.	
Area	45,283	17,083	125,404	51,237	170,687	68,320	...
Percentage	2·3	3·5	6·2	10·7	8·5	14·2	...

AREA UNDER MORTGAGE.

At last Settlement. Area ...	7,727	3,253	14,730	5,794	22,457	9,047	...
At last Settlement. Percentage	·4	·8	·7	1·5	1·1	2·3	12·6
At present Settlement. Area ...	80,666	37,757	84,912	38,374	165,578	76,131	...
At present Settlement. Percentage	4·0	7·9	4·2	7·9	8·2	15·8	14·5

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Agriculture
Indebtedness of landowners

Rather more than 14 per cent. of the cultivated area has been sold since last settlement, the alienations being made largely to the money-lending classes. The area sold to others includes land sold to Hindu agriculturists, but on the other hand the Hindús, who now depend entirely on agriculture, and have been as if it were assimilated to the Jat fraternity, have also sold some land. On the whole, therefore, the cultivated area possessed by Hindus in proprietary right has risen only from 17·5 to 20 per cent. of the total area. They, however, hold about 8 per cent. of the total cultivated area under mortgage now against ·8 per cent. at last settlement, and including the Hindu mortgagees falling under "other than *sáhúkárs*" the proportion is still larger. The fact is that a mortgage is looked upon more favourably by the money-lenders than a transfer by sale, as in the former class of transfer they can dictate their own terms with the mortgagors and so can depend upon a certain amount of annual profit without having to suffer losses in bad years. The following table shows the rise in the average mortgage value and sale price of land since last settlement by quinquennial periods :—

	MORTGAGE MONEY PER ACRE.		PRICE PER ACRE.	
	Cultivated.	Total.	Cultivated.	Total.
Before last settlement	42	17	...	...
1880-81 to 1884-85	57	32	52	21
1885-86 to 1889-90	56	25	61	25
1890-91 to 1894-95	60	29	79	30
1895-96 to 1899-1900	61	30	89	36

The value of land has risen steadily and very considerably, although the figures noted above, which have been taken from the statements of yearly totals of transfer have no doubt been exaggerated, as the consideration money usually entered in the deeds of sale or mortgage is much in excess of the real value of land, either in consequence of accumulation of interest which the money-lender adds up at the time of settling his accounts, or owing to a deliberate over-statement of the value in order to frustrate claims for pre-emption."

Effects of the Alienation of Land Act on transfers.

The Punjab Alienation of Land Act has had a marked effect in checking transfers of land as the following table will show :—

	MORTGAGES.		SALES.	
	Cases.	Area in acres.	Cases.	Area in acres.
1898-99	3,591	29,604	2,868	26,029
1899-1900	1,906	11,969	1,750	12,645
1900-01	5,016	24,818	4,732	20,615
1901-02	429	2,687	664	4,140
1902-03	722	4,148	1,637	11,895
1903-04	677	5,323	1,633	11,231
1904-05	517	4,551	1,446	10,844
1905-06	691	5,364	1,630	9,797
1906-07	936	6,122	1,467	14,920

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Agriculture

Causes of indebtedness.

The creditors are in almost all cases money-lenders. There are hardly any agriculturist in this district who lend money.

Mr. O'Brien's remarks regarding the causes of indebtedness printed in the old Gazetteer are reproduced below as they deal fully with the state of affairs, which still exists in many respects.

" The causes of indebtedness are common to owners and tenants, and may be divided into two classes ;—

" Physical causes arising from the special natural features of the district.

" The action of the agriculturists.

" The rainfall is so small that no crop will ripen from rain alone.

" Agriculture depends on the rising of the rivers and the inundation canals assisted by wells; excessive floods as well as failure in the regular rising of the river are ruinous to the agriculturist. Insufficient or irregular supply of water in the canals is a fruitful source of debt. The canals of this district have been very much neglected since British rule. In one *tahsil* the indebtedness is distinctly to be traced to this cause. Most of the debts date from 1869 and the subsequent years. From 1869 to 1875 the canals were not properly cleared, and consequently did not fill in the proper season, ran irregularly, and stopped flowing early. But the chief cause of the indebtedness lies in the habits of the people. They are very careless and lazy farmers; I do not suppose that the farming is very good anywhere in the Punjab, but the bad farming in this district at once attracts the notice of the native officials who come from the eastern and northern parts of the Punjab, and is a constant subject of remark. The agriculturists are wasteful in harvesting the crops and in preparing their indigo and sugar, and are careless in disposing of their produce, especially in not looking out for the best prices and in not retaining a stock for food and seed. It is an almost universal institution that shop-keepers should take the whole of the Government share of the crop and pay the cash revenue for the agriculturist. The Government share fixed by custom is one-third or one-fourth of the crop, and often is as high as one-half. The cash revenue is equal to about one-eighth. The large profits made by the shopkeeper on a transaction of this kind are evident. They neglect their bullocks, do not clothe them in winter and underfeed them; when a bullock comes from work, an armful of uncut and unwashed turnips are thrown before him. The bullock's teeth and lips grasp the round turnips with difficulty. It takes a long time for him to get a meal, and when it is eaten, he has taken in a quantity of earth which was clinging to the turnips. The consequence is that the bullocks are very soon worn out, and as the district does not breed its own bullocks, they have to be imported at a great cost.

" The agriculturists are very extravagant. They spend sums beyond their means at marriages, betrothals, circumcisions and funerals. They pay constant visits to shrines and places of pilgrimages, and make offerings there which they cannot afford. This part of the Punjab is overrun by religious impostors of different kinds, and the agriculturists make them presents out of all proportion to their incomes, and vie with one another in the largeness of their gifts. Persons who cannot afford to do so, keep saddle horses. Large sums are spent in womanising, lawful and unlawful.

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Agriculture
Causes of indebtedness.

"One great cause of debt is debt. The crops have generally been forestalled. When they are harvested, the creditors carry off the whole, and the agriculturist has to begin again borrowing for his daily wants, and he borrows under very disadvantageous circumstances. In the Alipur *tahsil* when cash is borrowed, 2½ annas is deducted as interest and *chilkána*, and after a year a balance is struck, and one-half is added to the balance. Thus if a person borrows Rs. 20 the loan is entered as Rs. 23-2-0, and if nothing is paid during the year, Rs. 11-9-0 is added to it and the debt is brought forward into next year's accounts as Rs. 34-11-0. There is a ruinous practice called *bhanauti* in practice, which can best be described by an instance which came to my knowledge this year. A borrowed money in December-January to pay the *kharif* instalment of land revenue, promising to repay the loan in June-July in grain at the rate of a *path*[1] of wheat for every Rs. 32 borrowed. The usual price of a *path* of wheat in June-July is Rs. 55. In the year in question the market price was Rs. 85. I have known instances of rich agriculturists who had money in their houses, forestalling the wheat crop by *bhanautí*, in order to pay the *kharíf* instalment of land revenue, rather than pay money out of their houses because they thought it unlucky.

"It is not bad farming or extravagance alone so much as improvidence that makes the agriculturists indebted. It is contrary to their habits to keep ready money by them. If a man makes a few hundred rupees more than his expenses, he will not keep any part of it for a bad year. He at once buys more land or more bullocks, or ornaments, or a wife. He will do anything rather than keep the cash. If then there is a bad harvest next year, he must go to the money-lender. No agriculturist ever has a balance to the good with his banker. Every one works with a balance to the bad, and trusts to the harvest to put him right. The money-lending class is well able to take advantage of the extravagance and improvidence of the cultivating class. There is a local proverb in use among the former on the wisdom of keeping the latter in debt, *i.e.*, *Jat te phat baddhé change*; An agriculturist, like a wound, is better when bound.

"There can be no doubt that the continued bad farming, extravagance and improvidence of the agriculturist classes has produced the present state of indebtedness. But if we go further and ask what caused the bad farming, extravagance and improvidence, the answer is that the people were never trained for the position in which they were placed by our Government, and were never fit for such a position. Under former Governments, they were kept, as regards agriculture, in a state of tutelage. They were quite unaccustomed to manage for themselves. The Government *kárdárs* did every thing for them, made them cultivate the land, made the Hindús lend them money and seed, and made the borrowers repay. The agriculturists were pitted against one another to cultivate. If one man did not cultivate his land, it was taken from him and given to another who could cultivate. After annexation his minute superintendence was withdrawn. The agriculturists were introduced for the first time to the name and responsibilities of proprietorship, and a system was introduced which enjoined the exact contrary. 'Don't interfere with the distribution of the assessment or the internal management of the villages, the people do this much better themselves,' was the order. The agriculturists who had for generations been accustomed to have every part of their economic details done for them by Government officials, were as helpless as a child which can hardly walk when deprived

[1] A measure of grain equal in weight to about 32 maunds.

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Agriculture

Causes of indebtedness.

of the chair on which it leaned, and the money-lender stepped into the place which the former Governments occupied. This, I believe, to be the true origin of the indebtedness in this district, and the neglect of the canals did the rest.

"The indebtedness in this district is greater than in any district with which I am acquainted. I append some very true remarks of Mr. Lyall's on the subject, which he made when reviewing the Assessment Report of the Alipur tahsil. 'I quite agree with Mr. O'Brien's remarks as to the indebtedness of the agriculturists, and the faults in their character which are its main cause. The same faults are attributed generally to the Muhammadan landholders of all this southern corner of the Punjab, but they are found in this *tahsil* in a very exaggerated form. The heavy floods and the fever which follows have something to do with it. The almost universal prosperity of the Kirár landholders is proof that there is nothing crushing in the general pitch of the assessment. But as the Biloches, Saiyads and Jats say, it would be folly to expect them to alter their characters and habits and rival the thrift and frugality of the Kirárs. These Kirárs are the Jews of the country, and have a special natural aptitude for earning and saving money. The general character of the agriculturists must be considered in assessing, but from what I have seen here and in Multan and Dera Gházi Khan I do not believe that a very light assessment would tend to get them out of debt'."

Unlike some other districts, however cases of reckless expenditure by landowners are few and far between here; and the marriage and funeral expenses are also by no means very extravagant. The indebtedness of the landowning classes may, therefore, be ascribed to such causes as carelessness, imprudence, litigation, high interest, and losses of cattle and crops in bad years. As wells form a very important feature of the agriculture of this district, it is natural that a peasant should want ready money every now and then for building a new well, repairing an old one, purchasing cattle to replace those which die out, and the like purposes, and when he has no money or grain at his command, he must resort to his banker. He must also borrow seed at harvest time. He is, therefore, sure to fall into the hands of the money-lender and be lost by degrees. There is no gainsaying the fact that the advances made by Government for Land Improvements and Agriculturists' Loans during the past have been totally inadequate to meet even a fraction of the demands of the agricultural community.

Rate of interest.

The usual rate of interest for persons with plenty of credit is 1 per cent. per month, or 12 per cent. per annum. The village money-lender, however, usually charges 1 pice per month for every rupee which means Re. 1-9-0 per cent. per month or Rs. 18-12-0 per annum. In some cases as much as 4 annas for every rupee or 25 per cent. per annum is taken. The usual rate for advances of grain is *sawai* (one-and-a-quarter). It is charged in two ways. Either the amount of grain advanced is repaid at the next harvest with one-fourth as much more, or the price of the grain advanced is put down as the debt and grain at the

current rate has to be paid at the next harvest for the original debt and one-fourth more. The *sawai* is in cases of need raised to *deodhi* (one-and-a-half).

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Cattle.

Table XXII gives the results of enumeration of live-stock. Cattle are not exported from the district. Bullocks are brought every year from three places—(1) Sangarh (in Dera Gházi Khan), (2) Bhág Nári (in Sindh), and (3) the Baháwalpur State. The animals in the district belong generally to one of the three breeds. The purely local breed is inferior. Goats and sheep are mostly local. The Thal sheep are a fine breed, large and fat. The Thal goats are good milkers. The goats are sometimes brought from the hills across the Indus for purposes of breeding.

The price of each kind of animal may be roughly estimated as below :—

				Average.
	Rs.		Rs.	Rs.
Horse or pony	10	to	400	80
Bullocks	20	,,	200	50
Cow	20	,,	60	40
Buffalo	30	,,	120	70
Camel	30	,,	150	80
Goat	4	,,	10	7
Sheep	3	,,	7	5

There is no scarcity of grass in this district. The waste lands in the riverain tracts and the Government Rakhs afford excellent grazing for cattle. The Thal is in years of good rainfall a paradise for camels, goats and sheep. In the central canal irrigated tracts, grazing grounds are limited. But, on the whole, there is no difficulty in feeding cattle.

Hissar bulls are kept for breeding purposes at the following places in charge of leading *zamindars* :—

Name of place.	Number kept.
Muzaffargarh	2
Thatha Koreshi	1
Jatoi	
Thatha Gurmani	

They are however not appreciated and are being replaced by bulls from Dera Gházi Khan.

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Horse-breeding.

This is not a horse-breeding district. Horses and ponies are very often imported from the Dera Gházi Khan District, some mares being owned jointly by men living on either bank of the Indus. The mares round about Rangpur belong to the Jhang breed and some of them are quite good. But people are beginning to take interest in horse-breeding and the stock from Government and District Board stallions is already considerable.

A horse and cattle fair was started in 1901, but had to be given up in 1902 for fear of an outbreak of plague. It was again held in 1903 and proved a great success. Altogether some 425 horses and mules and 57 bullocks attended and several purchases and sales took place. Rs. 571 were given away as prizes to the best animals in each class. Since then the fair has been held every year in the beginning of March under the management of the District Board and the Civil Veterinary Department, except in 1907-08 when the show had to be abandoned in consequence of the prevailing scarcity. Prizes were awarded as follows in 1906-07:—

	Rs.
Horses, etc.	328
Cattle	185
Total	513

There are stallion and donkey stands at Muzaffargarh, Rangpur, Kot Addu and Alipur. Table XXIII shows the number of stallions kept and the statistics of branding and breeding of mares. People are not at all fond of having ponies of indigenous breed castrated, the result being that many pony mares are covered by the good for nothing local ponies and the local breed does not improve half as much as it should.

Cattle diseases.

The more common cattle diseases are these. Cow-pox, here called *thadri, mái ráni,* and *sítla,* is by far the most fatal. *Patha,* a sort of colic, a common Punjab disease, is attributed to eating stunted *jowár*. Camels get it after eating *lei* branches, and bullocks sometimes suffer from it after eating turnips. *Mihru* is a maggot which cuts its way through the hide of the back into the flesh, and grows to a great size, an inch long and as thick as one's finger. It is said to do no harm, but the flesh swells, and the presence of a number of these maggots in the flesh must disorder the system. It seems only to infest cows and bullocks *Chaurímár*, literally the "shoulder-striker," is a kind of paralysis of the limbs. *Pan* is the name for itch. *Galghotu*, malignant sore throat, is common and very fatal. *Muhára* or *munh-khúr*, foot and mouth disease, is extremely common. *Wáh* (rinderpest) and *rikki* (purging) also cause much loss.

The remedies for all diseases are either (1) counter-irritants, as crude branding, cutting off part of the ear and putting irritating

Cattle diseses.

substances into the nose and ears, (2) superstitions, as getting a *fakir* to charm the animal, and taking it to a shrine, or (3) inert, as giving *ghi* or urine to drink. The diseases which cause most deaths are *thadri*, *chaurimár*, and *galghotu*.

There are three veterinary dispensaries, one in each *tahsil*. A Veterinary Assistant is in charge of each dispensary.

A senior Veterinary Assistant, who is not in charge of any dispensary, tours throughout the district for 20 days in each month on the average.

Irrigation. General conditions.

The spring level being very near the ground surface in all parts of this district except the Thal, perennial irrigation from canals, *viz.*, for maturing both the *kharif* and the *rabi* crops would raise the spring level considerably and result in water logging. The existing system of irrigation from inundation canal for 5 to 7 months in the year, *i.e.*, during the summer, succeeded by well irrigation (which tends to lower the spring level) for the rest of the year is the best suited to the requirements of this district.

Canal water is used for sowing and maturing all the *kharif* crops as well as for preparing the ground for the *rabi* crops. Sometimes when the water in a canal lasts long enough, it is possible to give a watering to the *rabi* crops after they have sprouted.

All canals in the district are inundation canals which flow only when the rivers run high. There are two canal systems in this division—the Indus canals system and the Chenab Canals system.

The Indus canals system consists of the following five canals :—

(1) The Magassan Canal, the main channels of which are as below—

(*a*) Upper Magassan	Main Line.	
(*b*) Lower "		
(*c*) Mohanwah...	Branches.	
(*d*) Chandhri		
(*e*) Sardar		

(2) Maggi Canal, the main channels of which are—

(*a*) Main Line of Maggi Canal.

(*b*) Khudadad...	Branches.
(*c*) Suk	
(*d*) Dinga	

(3) Ghuttu canal, the main channels of which are—

(*a*) Main Line of Ghuttu Canal.

(*b*) Adil	Branches.
(*c*) Raj	
(*d*) Bahishti	
(*e*) Sardar Ghuttu	

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Irrigation. General conditions.

(4) Puran Canal, the main channels of which are—

(a) Main line of Puran Canal.
(b) Surab ... ... } Branches.
(c) Kaure Khan ... ... }
(d) Bakhi ... ... }
(e) Kapre Khas ... ... }
(f) Lunda ... ... }

(5) Suleiman Canal, the main channels of which are—

(a) Main Line of Suleiman Canal.
(b) Soharu ... ... } Branches.
(c) Khanwah ... ... }

A canal named Kot Sultan (which takes off the river in the Leiah Tahsil) also irrigates the northern part of the district in the neighbourhood of Daira Din Panah.

The Chenab canals system consists of four canals :—

(1) Karam which is a small canal taking off the river in the Jhang District and irrigating the north-eastern part of this district in the neighbourhood of Rangpur.

(2) Ganesh Canal, main line with Walliwah branch.

(3) Taliri Canal with its branches, Hajiwah and Khanwah.

(4) Jhangawar Canal with its branches, Makhnau, Jhandau, Alli and Khalli.

The last mentioned two canals (3) and (4) have been amalgamated, and will in future run from a single river head.

History of the canals.

A brief history of the different canals in the district is given below :—

CHENAB SERIES.

Karamwah.

The canal was a creek of the Chenab called Dadal. This creek was improved by Dīwan Karam Narain, son of Diwan Sawan Mal, Governor of Rangpur, who spent Rs. 5,000 on the work, and repaid himself by levying Rs. 5 per outlet. Owing to the action of the river, the head of the canal had to be changed from time to time, the different heads being constructed with *chher* labour.

No compensation was ever paid by Government on account of cost of land under the canal. It was originally recorded as belonging to various villages, but at the first regular settlement the entry made in the records in respect of the ownership of land was Zer Nala, *i.e.*, under the canal. Compensation was paid only, when a new head had to be excavated in the Jhang District in 1885. When the new canal rules came into force, the canal was classed as a Government canal.

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History of the canals.

The following are the branches of the canal :—

(1) Bighari, $9\frac{1}{2}$ miles in length.
(2) Fattu Fannakka, about a mile in length.
(3) Jalluwah, $2\frac{1}{8}$ miles long.
(4) Massuwali, 1 mile long.
(5) Akbarwah, $6\frac{1}{2}$ miles long.

The Public Works Department spent Rs. 4,084 in 1888-89 on a rest-house and chauki at Rangpur, and Rs. 444 in 1890 on a well in the compound of the rest-house, the expenditure being met from *zar-i-nagha.*

Ganeshwah.

Excavated in the time of Nawab Muzaffar Khan, 95 years ago, by the zamindars at their own cost. It was then called the Gauswah. In the time of Diwan Sawan Mal its name was changed to Ganeshwah. The course of the canal was very tortuous between Shahrangpur and Khanpur. In 1883 it was straightened and made parallel to the Rangpur Road.

Till 1879 no compensation was paid by Government on account of cost of land. In 1883 Rs. 512-9-6 were paid out of *zar-i-nagha* as compensation for the land obtained for straightening the canal.

The following are the branches of Ganeshwah :—

(1) *Karya.*—Dug at his own expense by one Chhaju Mal in Diwan Sawan Mal's time, 60 years ago.
(2) *Waliwah.*—Constructed in 1883-84.
(3) *Khandar.*—An old part of the Ganeshwah lying in ruin, $1\frac{1}{4}$ miles long. Irrigates the neighbouring villages.
(4) *Lunda.*—Dug by people 80 years ago at their own expense, amounting to Rs. 500. The branch became useless, and a new one was dug in the time of Diwan Sawan Mal costing Rs. 200.
(5) *Jalalabad.*—$2\frac{1}{2}$ miles long. Irrrigates Jalalabad.
(6) *Jagatpur.*—$4\frac{3}{4}$ miles long. Dug by the irrigators at their own cost.

Jhangawar.

Dug by Nawab Bahawal Khan at a cost of Rs. 4,000, 120 years ago. Owing to the action of the river its head had to be changed from time to time.

No compensation was ever paid.

It has only two branches—

(1) *Pirwah.*—Dug by the zamindars in the time of Nawab Bahawal Khan 120 years ago.
(2) *Makhnau.*—Dug by the zamindars in the time of Nawab Bahawal Khan 120 years ago

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The Public Works Department spent Rs. 5,746 in 1895-96 on a regulator, the charge being met from the *zar-i-nagha* fund.

Taliri.

From time immemorial the canal ran in the shape of a branch of the Chenab from Khudai to Kachi Saidu Khan. Owing to the action of the river, the head of the canal had to be changed from time to time. The canal was straightened and widened for 6 miles with *chher* labour, and Rs. 4,000 were paid out of *zar-i-nagha*.

No compensation was paid.

The following are the branches of the canal :—

(*i*) *Shakh Takan Mal or Purana Taliri.*—A part of the old Taliri now serving as a branch of the canal.

(*ii*) *Rajwah Gharbi and Sharki.*—Constructed with *chher* labour. No compensation was paid.

(*iii*) *Hajiwah.*—Dug in the time of Nawab Muhammad Zafar Khan, in Sambat 1845, 11 miles in length.

(*iv*) *Khanwah.*—Dug in the time of Nawab Muhammad Zafar Khan in Sambat 1845.

(*v*) *Ghazanfarwah.*—Re-constructed at a cost of Rs. 4,000 in the time of Nawab Ghazanfar Khan 120 years ago.

(*vi*) *Pirwah.*—Dug by irrigators in the time of Nawab Shuja Khan in Sambat 1845 at a cost of Rs. 3,000.

(*vii*) *Nangniwah.*—Dug by irrigators 110 years ago in the time of Nawab Shujah Khan at a cost of Rs. 3,000.

(*viii*) *Khokar.*—Dug by irrigators 115 years ago in the time of Nawab Shujah Khan at a cost of Rs. 4,000.

(*ix*) *Nurwah.*—Dug by irrigators 113 years ago in the time of Nawab Shujah Khan at the cost of Rs. 4,000.

Alli-Khalli.

Formerly there were two branches ;—Alli, which was dug in the time of Diwan Sawan Mal, 70 years ago, and Khali dug in the time of Nawab Bahawal Khan, 120 years ago. Afterwards the creek of the River Chenab feeding these canals was taken as one canal, and Alli and Khalli treated as its branches.

No compensation was paid.

It has four branches—

(1) *Alliwah.*—Dug in the time of Diwan Sawan Mal at a cost of Rs. 2,000.

(2) *Khalliwah.*—Dug by irrigators of Mochiwali and Makhan Bela in the time of Nawab Bahawal Khan.

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(3) *Jhandaú.*—Dug by the zamindars of Jhandewali 65 years ago.

(4) *Dharkanwala.*—Dug by irrigators in the time of Diwan Sawan Mal 70 years ago.

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Garku.

During the reign of the Khurasan Rulers, one Abdul Samad Khan, a Jagirdar, dug this canal about 100 years ago from the Chhitta Creek at his own expense, and one Mian Matka widened it in the time of Maharaja Ranjit Singh. Owing to the action of the river, its head had to be changed twice.

No compensation has been paid by Government for land under the canal and its distributaries except in the following cases:—

	Rs.
(*a*) For Rajbah, Riayatwah (branch of the Mohanwah)	7,800-0-0
(*b*) For the construction of a new head and part of the Mohanwah	2,334-3-3

The following are the branches of the canal:—

(1) *Kot Sultan.*—Dug in 1883-84 with *chher* labour.

(2) *Hinjrai.*—An old branch of the Ghuttu. It was constructed by irrigators at their own expense in the time of Maharaja Ranjit Singh 70 years ago.

(3) *Din Muhammad.*—Dug by irrigators in the time of the Khurasan Rulers 100 years ago.

(4) *Radha.*—Dug by the Canal Department with *chher* labour in 1884-85. No compensation was paid.

(5) *Mohanwah.*—Dug by the Canal Department with *chher* labour in 1882-83. A new head and a branch were constructed in 1892 with *chher* labour.

(6) *Nangni.*—Dug by the zamindars in the time of Diwan Sawan Mal 70 years ago.

(7) *Khan Chand.*—Dug by Matka, Kardar, in the time of the Sikhs 65 years ago.

(8) *Fazil.*—Dug by the zamindars in Sambat 1919-20 under the supervision of M. Fazil Husain, Tahsildar. In 1818 its head was changed with *chher* labour.

(9) *Panjhathi.*—Dug by the zamindars 71 years ago.

(10) *Mirwah* alias *Utani.*—Dug by the zamindars of Parhar Sharki and Kut in 1867-68 under the supervision of M. Mir Muhammad, Tahsildar.

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4. The Canal Department spent the following amounts on the works noted below :—

Nala.	Work.	Year.	Cost.
			Rs.
Hazari	Regulator	1882-83	2,575
Gulzari	Ditto	1882-83	1,918
Din Muhammad...	Ditto	1882-83	2,845
Khan Chand	Ditto	1882-83	2,207
Fazilwah...	Ditto	1882-83	2,618
Nangni	Ditto	1882-83	1,344
	Rest-house (Karari)	1882-83	490
	Rest-house (Pharhir)	1882-83	2,180
	Shelter-house (Garku) ...	1882-83	1,355
	Rest-house (Kot Sultan) ...	1888	4,358
	Well in the compound of rest-house at Kot Sultan.	1890	442

The whole of the money was spent from the *zar-i-nagha* fund.

Magassan.

Owing to the action of the river, an old bed of the river began to run in the time of the Afghan Rulers 107 years ago. From this bed the irrigators dug this canal.

In 1888 the Khanwah was extended, and Rs. 585 were paid as compensation for 15·12 acres.

In 1889 again the head of this canal was straightened, and 11-1-24 acres of land came under it. No compensation was paid for the land. In 1889 the Chaudriwah was straightened, and no compensation was paid.

The following are the branches of Magassan :—

(1) *Chaudri.*—Was dug from Garku by Paira Ram at a cost of Rs. 1,300, 110 years ago, in the time of Nawab Muhammad Khan. After 40 years it was joined on to Magassan. Nangni and Dhol are its branches—

Nangni.—Dug by irrigators 85 years ago. Its tail splits into two branches, *i. e.*, Nangni and Nari.

Dhol—Dug up by irrigators 65 years ago.

Sirmuni.—Dug by the irrigators 85 years ago.

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(2) *Kesho.*—Dug along the eastern side of bund with *chher* labour in 1882 by the Canal Department, and extended in 1888. It has two branches—

(*i*) *Ganda Bhubbar.*—Dug from the Magassan Creek 110 years ago. This branch has 3 sub-branches —(1) Sahju, (2) Sohni and (3) Hala.

(*ii*) *Ganda Parhar.*—Dug from the Magassan by irrigators 90 years ago.

(3) *Raju.*—Dug by irrigators in the time of Khazan Singh, Kardar, 70 years ago.

(4) *Karya Chaudri* and *Nabiwah.*

(5) *Sardarwah.*—Dug by the zamindars in the time of Nawab Muhammad Khan 110 years ago. It has the following branches :—

(*i*) *Karya Muhammadpur.*—Dug by irrigators 70 years ago under the supervision of Sube Khan, Kardar, of Muhammadpur.

(*ii*) *Karya Gaman Khan.*—Dug by irrigators 90 years ago in the time of Nawab Muhammad Khan.

(*iii*) *Karya Khanpur.*—Dug by irrigators 70 years ago under the supervision of the Kardar of Khanpur.

(*iv*) *Karya Sinanwan.*—As in (*ii*).

(*v*) *Karya Tej Bhan.*

(*iv*) *Muradwah.*—Dug in 1883-84 with *chher* labour under the supervision of the Canal Department.

(*vii*) & (*viii*) *Nangnis Kalan and Khurd.*—Both the canals were dug up by irrigators in the time of Afghan Rulers some 130 years ago. Nangni Khurd being useless for 25 years was reconstructed in the time of Diwan Sawan Mal.

(*ix*) *Jan Muhammad.*—Dug by Jan Muhammad and other irrigators of Ladha Langar in the time of Afghan Rulers in Sambat 1909.

(*x*) *Pirwah.*—Dug by Pir Shah Nawaz and other irrigators 41 years ago.

(*xi*) *Hamza.*—Dug jointly by Diwan Sawan Mal and the irrigators 70 years ago.

(*xii*) *Chakar Khan.*—Dug twice from a *dhand* in Jhandir Dureja Gharbi by the irrigators of Thatta Gurmani, and then from the Magassan

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Creek by Chakar Khan before the time of Diwan Sawan Mal. It has two branches:—

(i) *Karya Khokhar.*—Dug by irrigators of Khokhar 45 years ago.

(ii) *Karya Tibbi Nizam.*—Dug by the irrigators of Tibbi Nizam—40 years ago.

(xiii) *Nala Chuan.*—Dug by the irrigators of Sinanwan and Mahmud Kot in the time of Nawab Mahmud Khan 120 years ago.

(xiv) *Ghulamwah.*—Was originally a small watercourse but was afterwards turned into a canal.

Maggi.

It was a branch of the river from which canals were dug from time to time. Owing to a change in the course of the river it assumed the shape of a canal, and in 1883-84 it was classed as a canal.

No compensation was paid for the land under the canal. Rupees 93-1-8 were, however, paid for land acquired for a *bund* in Chibbar Khor Serin and Sharif Chajjra in 1889.

The following are the important branches of the canal:—

(1) *Khudadad.*—Dug with *chher* labours in 1882-83. A new head was constructed in Thatta Gurmani in 1888. It has 6 branches:—

(i) *Kotwah.*—An old branch. Dug in Sambat 1912 by irrigators.

(ii) *Karya Kuhawar.*—Dug by zamindars in the time of the Afghan Rulers.

(iii) *Haji Ishaq.*—Dug by irrigators in 1879 at a cost of Rs. 2,000, one-fourth of which was paid by Government out of the *zar-i-nagha* fund.

(iv) *Bulewali.*—Dug with *chher* labour in 1887 by the Canal Department.

(v) *Sultan Khar.*—Dug by irrigators.

(vi) *Fazil Kalru.*—Dug by irrigators.

(2) *Suk.*—It has six important branches:—

(i) *Jakhriwah.*—Dug by irrigators in the time of Nawab Bahawal Khan 170 years ago.

(ii) *Thalwah.*—Dug by the zamindars 140 years ago in the time of Nawab Muhammad Khan. Bahawalwah and Karya Ghattawala are its branches.

(iii) *Sanwah.*—Dug by zamindars 200 years ago in the time of Nawab Gazi Khan. A new head was constructed in the time of Diwan Sawan Mal 70 years ago.

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(*iv*) *Kaluwah.*—Dug by irrigators at their own expense, amounting to Rs. 9,000 in 1840. A new head was constructed at the cost of Rs. 115 paid out of *zar-i-nagha.*

(*v*) *Sardar Khurd.* It was dug by irrigators in the time of Nawab Sadiq Muhammad Khan 96 years ago. A new head was constructed in Sambat 1920.

(*vi*) *Ahmadwah.*—Was first a zamindari *nala.* In 1890 it was classed as a Government canal.

(3) *Dinga.*—Has three important branches :—

(*i*) *Bhangarwah.*—Was a zamindari *nala.* In 1890 it was classed as a Government canal.

(*ii*) *Sardar Kalan.*—Dug in the time of Nawab Ghazi Khan 200 years ago by zamindars.

(*iii*) *Nangwah.*—Dug by irrigators in the time of Nawab Mubarik Khan 200 years ago. Chatle and Garkanna are its branches.

Government constructed a rest-house at Kinjhar at a cost of Rs. 3,784 in 1886-87 to 1895-96, and a shelter hut of Sardar Kalan at a cost of Rs. 312 in 1896. Both the sums were met from the *zar-i-nagha* fund.

Adilwah.

Dug by irrigators 170 years ago in the time of Nawab Bahawal Khan. Owing to the action of the river its head had to be changed from time to time.

No compensation was ever paid for land taken up.

It has nine branches and is 10 or 11 miles long—

(1) *Karya Khokhar.*—Dug by the zamindars 145 years ago.

(2) *Karya Isa Bhabewala.*—Dug by irrigators 120 years ago.

(3) *Karya Rakba Sarkari.*—Dug by irrigators 170 years ago.

(4) *Karya Dewalewala.*—Dug by irrigators.

(5) *Karya Makwalwala.*—Dug by irrigators 140 years ago.

(6) *Menghwah.*—Dug by Mangha Karar, an irrigator, 110 years ago.

(7) *Paunta Malana.*—Dug by Ala Yar, Malana, and other irrigators, 65 years ago.

(8) *Karya Bilochanwala.*—Dug by irrigators 15 years ago.

(9) *Harpallo.*—Dug by the zamindars of Basti Jallol 145 years ago, and extended lately to Harpallo.

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Ghuttu.

Formerly it was a branch of the River Indus called Chhitta. Several canals were dug from this branch. It does not require repair, but its head has sometimes to be changed. In 1896-97 a new head was constructed in village Yarajoya. In 1883-84 it was classed as a canal, and the canals fed from it as its branches.

Compensation was paid only in the following cases from the *zar-i-nagha* fund :—

	Rs.	A.	P.
In 1887 for Karmwah	849	14	6
In 1888 for Rajwah head...	809	14	3

It has the following branches :—

(1) *Pir.*—Dug in Sambat 1918 by the zamindars of Paunta Malana, Bhundewali and Rohillanwali, who also spent Rs. 5,000 in cash. After some time a new head was constructed in village Fattah Muhammad Abrind at a cost of Rs. 2,000. In 1884-85 the course of the branch was changed from Bhundewali to Rohillanwali with *chher* labour.

(2) *Rajwah.*—Dug by irrigators 170 years ago in the time of Nawab Bahawal Khan.

It has three branches :—

(*i*) *Kalan Shah.*—Dug by zamindars 120 years ago.

(*ii*) *Hammarwali.*

(*iii*) *Darin.*—Dug in Sambat 1911 by zamindars.

(3) *Bahishti.*—Dug 180 years ago in the time of Nawab Gazi Khan by the irrigators. It ceased to run 40 years after, and in Sambat 1918 was reconstructed by the irrigators at a cost of Rs. 9,000. It splits into two branches :—

(*i*) Bakhtwah, which was dug 34 years ago by the irrigators of Kadirpur.

(*ii*) Azimwah, which was constructed with *chher* labour in 1883-84.

(4) *Rerhu.*—Dug from Chhitta Creek in the time of Nawab Bahawal Khan by the irrigators of certain villages at a cost of Rs. 7,000. Its head had to be changed several times. It has four branches :—

(*i*) *Karya-Fattu Mal.*—Dug by irrigators 145 years ago.

(*ii*) *Mohriwal.*—Dug by irrigators 145 years ago.

(*iii*) *Karya Jannun.*—Dug by irrigators 144 years ago.

(*iv*) *Karya Tahliwala.*—Dug by irrigators 145 years ago.

(5) *Sardarwah.*—Dug by irrigators 140 years ago in the time of Nawab Bahawal Khan with *chher* labour. It has six branches :—

(i) *Shujra Kassi.*—Dug in 1887 with *chher* labour.

(ii) *Ahmad Shah.*

(iii) *Khandar.*—Dug by irrigators 120 years ago and widened in 1884-85 with *chher* labour.

(iv) *Karam.*—Dug by irrigators 120 years ago.

(v) *Muradpuri.*—Dug by irrigators 34 years ago at a cost of Rs. 3,000.

(vi) *Hajiwah.*—Dug by irrigators 22 years ago.

(6) *Harnamwah.*—Dug by the Canal Department with *chher* labour in 1887.

(7) *Ghallu.*—Dug by irrigators in the time of Nawab Bahawal Khan 120 years ago.

Puran.

An old bed of the Indus. Some 170 years ago Sehj Ram Kardar, constructed it by levying a *chhera* per well in the time of Nawab Bahawal Khan. A new head was constructed in the time of Diwan Mul Raj at the cost of Rs. 16,000—three-fourths of the amount was expended by irrigators and one-fourth by the Diwan himself. Owing to the action of the river different heads had to be constructed from time to time with *chher* labour.

No compensation was paid except in the following cases :—

	Acres.	Rs. A. P.
In 1888.—For Lunda branch	185·45	
For Puran „	40·48	
For Rakh „	22·52	
For Gauspur „	11·12	
For Bazwala „	10·36	
	269·93—	6,381 10 11
In 1891.—For the construction of new heads of Bahawalwah and Julwah	1·12—	32 9 0

The following are the branches of the canal :—

(1) *Karya Nabi Bakhsh Shahwala.*—Constructed at the request of the irrigators of Bet Hazari, &c., with *chher* labour in 1896-97.

(2) *Shakh Kaure Khan.*—Constructed in 1898-99 with *chher* labour at the request of Kaure Khan.

(3) *Bhakhi.*—Was constructed from his own pocket 120 years ago with *chher* labour. Nawab Bahawal Khan paid Rs. 5,000 to assist the construction work. It has two branches :—

(i) *Karya Turk.*—Constructed by irrigators at a cost of Rs. 250.

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(*ii*) *Karya Sandilewala.*—Was constructed 110 years ago by irrigators with their own labour.

(4) *Khanana.*—Constructed 110 years ago by the zamindars of Bet Khanwala and Mela Chacha with their own labour. A new head was constructed in 1889 with *chher* labour.

(5) *Namana.*—Constructed by irrrigators with their own labour 150 years ago.

(6) *Kaprekhas.*—Constructed 100 years ago in the time of the Nawab Bahawal Khan by the zamindars of Jhallarin ($\frac{2}{5}$ths) and Wassan ($\frac{3}{5}$ths) at a cost of Rs. 1,500. Rupees 100 were again spent after 30 years on the construction of a new head.

(7) *Saidwah.*—Was excavated in 1884 at the request of the zamindars of Hamzewali with *chher* labour and extended to Gagrewali and Muddwala in 1892.

(8) *Kutab.*—Dug by the zamindars of Shahbazpur and Jhallarin 80 years ago. After 40 years its head was changed at a cost of Rs. 4,000. Extended in 1890 with *chher* labour.

(9) *Lunda.*—Dug by irrigators 120 years ago and extended by the Canal Department in 1888 to Ghari.

(10) *Sahaiwala.*—Dug by the zamindars 130 years ago.

(11) *Pirwah.*—Dug by certain villages at a cost of Rs. 11,000, 170 years ago. A new branch was constructed in 1890 by the Canal Department.

(12) *Punnuwah.*—Dug by the irrigators 80 years ago and extended to Aliwali in 1888 by the Canal Department.

(13) *Matwaniwali.*—Dug by irrigators 70 years ago.

(14) *Sultan.*—Dug by irrigators 120 years ago at a cost of Rs. 400.

(15) *Rajwah.*—Constructed by the Canal Department in 1890-91.

(16) *Bhagti.*—Dug in 1882-83 and extended in 1883-84 with *chher* labour.

(17) *Kadra.*—Dug by irrigators 170 years ago in the time of Nawab Bahawal Khan. It has the following branches :—

(*i*) Rakh,

(*ii*) Bazwah, and

(*iii*) Ghauspur.

(18) *Bahawalwah.*—Dug in the time of Nawab Bahawal Khan 110 years ago. Half of the amount expended on the work was paid by the Nawab and the other half by the irrigators.

(19) *Khanwah.*—Dug by irrigators in the time of Nawab Bahawal Khan 100 years ago and extended in 1891 with *chher* labour.

Sohrab.

Constructed by Nawab Gazi Khan 150 years ago at a cost of Rs. 75,000. Nawab Bahawal Khan constructed a new head 110 years ago spending Rs. 4,000. The head had to be changed twice later on, Rs. 10,550 being spent by the Nawab. In the time of Diwan Sawan Mal the head was changed twice with *chher* labour.

No compensation was ever given except Rs. 791-4-7 paid for land taken up for a new head in 1895. The amount was met from *zar-i-nagha.*

It has three branches :—

(1) *Jogiwah.*

(2) *Mughalwah.*—Dug in the time of Nawab Gazi Khan 140 years ago by one Nur Muhammad Khan at a cost of Rs. 5,000.

Being useless, it was reconstructed by the zamindars of Bilewala, Kot Ratta, Khalti and Jatoi Shumali. In 1896 and 1897 it was straightened in the boundaries of Daulatwahi.

(3) *Ratanwah.*—Dug by irrigators 70 years ago and extended in 1898-99.

Suleman.

Dug with *chher* labour in the time of Nawab Bahawal Khan under the supervision of Sultan Khan from the Mochiwala Creek, 90 years ago. A new head was constructed in 1888-89 from the Sohni Creek. Since 1896-97 the old channel has been used as its head.

No compensation was paid.

It has the following branches :—

(1) *Khanwah.*—Dug with *chher* labour by irrigators in the time of Nawab Bahawal Khan 100 years ago. Owing to the action of the river its head had to be changed three times. The last one was dug from Suleman in 1883-84. In 1889 a curve of the branch was straightened with *chher* labour.

(2) *Wahli.*—Dug by irrigators 70 years ago.

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(3) *Soharu.*—Dug in the time of Diwan Sawan Mal by the villagers of Dera and Kohar Fakiran 62 years ago. It has six branches constructed by Government :—

(*i*) Khairpur,
(*ii*) Mithanwali,
(*iii*) Nabipur,
(*iv*) Sultanpur,
(*v*) Lalwah, and
(*vi*) Umarwah.

The first four were dug in 1889 from the *zar-i-nagha* fund;—the fifth and the sixth with *chher* labour in 1893-94 and 1891 respectively.

Substitution of occupiers' rates for *chher*.

The canals in this district are all inundation canals, and the main canals were all originally constructed by the people. Before annexation, the management of the canals was in the hands of the irrigators, assisted by the local officials, who saw that the labour necessary for the clearances and maintenance of the canals was promptly turned out. From annexation till 1880 improvements in the management of the canals were made from time to time, but eventually the necessity of professional management was recognized, and in 1880 the district was constituted a Public Works Department Division and an Executive Engineer was appointed to manage the canals in the district. The irrigators paid no price for the water beyond furnishing labour to clear and maintain the canals according to a system called the *chher* system, which is explained below:—

"The *chher* system, as it now exists, may be briefly described as follows:—The working expenses of the canals, with the exception of a contribution of nearly Rs. 17,000 made by Government on account of pay of Dároghas, Mirábs, &c., out of the Imperial Funds, are borne by the people. The clearances are effected by *chher* labour supplied by the people, and any work left unfinished is completed by paid labour out of the Zár-i-nágha Fund into which all fines inflicted upon absentee *chher-guzárs* (assessors of statute labour) are credited. Other improvements needed are also effected out of this fund, when there is money to spare. As regards the assessement of *chher*, an estimate of the probable requirements of each canal is made by striking an average for the past three years, of the total number of *chherás* (labourers), who were actually present on work together with *chherás* remitted to *sarpanches*, and any supplementary *chherás* called out. To this average is added the number of *chherás* called out for urgent works in summer. The estimate is discussed by the Divisional Canal Officer with the *sarpanches* (representatives of irrigators on each canal assembled in a committee, and is raised or lowered within a limit of 20 per cent., according to the probable requirements of the next working season. The total *chher* assessable for the year is thus arrived at. This is done in the month of September. An average rate per acre is then deduced by dividing the total number of *chherás* required for each canal by the average area irrigated by that canal during the past three years. This rate is called the *chher-parta*. The *chher-parta* for each canal is communicated to the Collector who has *chher* papers prepared by the patwáris. The area irrigated is assessed at the *parta* above mentioned, and so the number of *chherás* to be supplied by each irrigator is determined."

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Substitution of occupiers' rates for *chher.*

The question of abolition of the *chher* system was taken up at the recent settlement and after full consideration of the advantages and disadvantages of the system it was recognized that the time had come when the system of statute labour should be abolished and an occupiers' rate substituted for it. On what considerations the rates should be fixed formed the subject of discussion, and it was eventually decided by His Honour the Lieutenant-Governor that for the present the rates may be so fixed "as to yield an income which shall not more than cover the cost of working the canals." The abolition of the *chher* system was sanctioned by the Punjab Government in their Revenue Secretary's letter No. 48, dated 4th March 1902.

The contention of the Canal Department was that the occupiers' rates should be framed irrespective of the working expenses, and should represent the price of water. The reasons which led Government to the above decision were thus stated in the above-mentioned letter:

"The enhancement of land revenue which is being taken is a full one, the abolition of *chher* is a change which the majority of the people profess to dislike, and in the absence of keen competition of tenants for land there is a danger that the occupiers' rates, if high or full, might fall upon the owners to pay in addition to the land revenue."

Different estimates of the cost of working the canals were framed, and the final estimate of the Chief Engineer, Irrigation Department, amounted to Rs. 2,24,634 per annum. The following rates, which were estimated to yield an income of Rs. 2,14,653 on an average of years, were sanctioned by the Government of India in their Under-Secretary, Public Works Department's letter, No. 673, C. W. J., dated 6th June 1902:—

Class.	Crops.	Rate per acre of matured crops.	
		Flow.	Lift.
	CHENAB CANALS.	Rs. a. p.	Rs. a. p.
I	Rice, garden, pepper	2 4 0	1 2 0
II	Cotton, sugarcane	1 8 0	0 12 0
III	Other kharif crops	1 2 0	0 9 0
IV	Rabi crops	0 12 0	0 6 0
	INDUS CANALS.		
I	Rice, garden, pepper	1 8 0	0 12 0
II	Cotton, sugarcane, indigo	1 0 0	0 8 0
III	Other kharif crops	0 12 0	0 6 0
IV	Rabi crops	0 8 0	0 4 0

These rates will be assessed every year on the area of matured crops. Certain lands receiving canal irrigation, which have hitherto been exempt from furnishing *chher* or have furnished *chher* at half rates, are to be treated in accordance with rules sanctioned by the

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Substitution of occupiers' rates for *chher.*

Punjab Government in their Revenue and Financial Secretary's letter No. 82, dated 21st September 1903, and given in Appendix VII-G to the Settlement Report.

A double set of rates for the Chenáb and Indus Canals was justified owing to a very considerable difference in the fertilizing value of the silt carried by the water of the two rivers, the difference in the quality of the lands irrigated by the canals fed from the two rivers, and the profits of the cultivators and owners derived therefrom. The occupiers' rates were introduced on the Garku, Magassan and Maggi Canals which irrigate the Sinánwán *tahsil* and part of *tahsil* Muzaffargarh with effect from *kharíf* 1902, and in the rest of the district from *kharíf* 1903.

The estimate of income from occupiers' rates was a cautious one, and probably the actual income will be much larger.

It will not be out of place to observe that, although the rates now fixed are subject to quinquennial revision, yet in consideration of the fact that their introduction has caused a very great economic change in the district, and that the assessments which have been imposed at the Settlement include the profits from canal water which might form part of a full occupier's rate, it is doubtful if there will be sufficient reasons for the enhancement of these rates after five years, and any proposals which may be made in this respect after five years will have to be very carefully considered. The estimate of income from the occuipers' rates was based on the understanding that allowance for failed crops (*kharába*) would in future years be made at an average rate of about 15 per cent. of the sown area, and it is trusted that the allowance will be made liberally in the crop inspections which will form the basis of the assessment of occupiers' rates.

Canal credits.

All the revenue realized from the occupiers' rates will go to the Canal Department as a direct credit. They are, however, also entitled to a share of the land-revenue which may be said to consist of the water-advantage revenue in the canal-irrigated tract where cultivation depends mainly on canals. The Canal Department will, under the orders contained in Revenue Secretary to Punjab Government's letter No. 117, dated 4th December 1903, be given indirect credit for the following items :—

(*a*) all canal-advantage revenue which may hereafter be assessed on extended canal irrigation in holdings not now assessed as nahri ;

(*b*) a sum of Rs. 2,38,000 per annum out of the fixed land revenue (representing the whole of the revenue on nahri lands and half of that on the cháhi-nahri) ; and

(*c*) all fluctuating revenue assessed on canal-irrigated (nahri and cháhi-nahri) crops (by crop rates) which would, if calculated on the crops of 1901-02, have amounted to Rs. 1,23,913.

CHAP. II,A.
Agriculture
Bunds.

There are two series of bunds (protective embankments) in this district. One of these (called the Indus bund) runs along the Indus river continuously from Ahsanpur, the most northern village of the district to village Khanwah, in the Alipur *tahsil*. The other series (called the Chenab bund) runs from a little below Langar Sarai to opposite Rohillanwali (*tahsil* Muzaffargarh). These bunds serve the purpose of preventing river spill from flooding canal-irrigated land situated inside the bunds.

Irrigation by canals.

The indigenous method of irrigation by canals consisted of (*a*) Lift-irrigation by means of *jhallars* worked by Persian-wheels erected on the canals and their branches; (*b*) Flow-irrigation by means of cuts (Tukka) in the banks of canal channels assisted, in case of high lands, by "chhaps" (Brushwood obstructions) or "bunds" (earthen dams) thrown across the bed of the canal channel concerned. These are, however, being gradually replaced by the more scientific methods of irrigation through masonry water-course heads, masonry regulators, and a regular system of "wara bandi" (irrigation by turns) between the different channels of each canal.

Wells.

Irrigation from wells is carried on by means of Persian-wheels. No other form of water-lift is in use in this district.

Irrigation from regular tanks is unknown. In case, however, of riverain lands where the spring level is very near the ground surface, small square artificial pounds are dug instead of making a *kachcha* well, and irrigation is done from these with the help of *jhallars* (Persian-wheels).

Water is lifted from creeks in the riverain tracts by means of *jhallars* (Persian-wheels).

Jhallars on creeks.

In a few villages of the *chahi sailab* tracts where the land is high and the level of water in the creek or backwater channels is low, double lifts are employed, two *jhallars* being placed one above the other to raise the same water. Such a double lift is called *beghar*.

Other indigenous methods of lift.

Where water has to be raised only a few feet this is done by *jhattá*, which consists of a baskets with two ropes tied on to the bottom. Two men one standing on either side and catching hold of the rope-ends dip the basket in water and throw it on to the land.

Area irrigated.

The district has practically no unirrigated cultivation. Of the total area cultivated in 1902-03, 392,468 acres, or 76 per cent., were classed as irrigated. Of this area 54,888 acres were irrigated by wells, 135,493 by wells and canals, 173,724 by canals, and 28,363 by creeks and tanks, and 124,255 acres, or the remaining 24 per cent. of the cultivated area, were subject to inundation from the Indus and Chenab. As the canals only flow while the rivers are in flood, they are largely supplemented by

CHAP. II, A. — Agriculture.

wells, of which 13,442 were in use, all worked with Persian-wheels by cattle. Irrigation from creeks and tanks is carried on by means of water-lifts, there being 2,767 water-lifts and temporary wells.

Major and minor irrigation works.

There are no major irrigation works in this district. All the canals are classed under minor irrigation works.

Canal used for navigation.

No canals in this district are used for navigation purposes.

Details regarding (a) bunds, (b) area irrigable and irrigated.

The total length of bunds in this district is as below :—

	Miles.
(1) Indus bunds	108
(2) Chenab bunds	38

Details of area irrigable and irrigated, according to the figures of 1906-07, are noted below :—

Name of tahsil.	Area irrigable in acres.	Area irrigated in acres.
Muzaffargarh	229,543	138,702
Alipur	227,262	75,269
Sinawan	218,127	82,603
Total	674,932	296,574

Fishing industry.

Fishing affords a living to Jhabels and certain other classes. The right to fish in the *dhands*—depressions and backwater channels—lying in the interior of the district is leased every year. Similarly fishing on the Chenab and on the Indus (only in the Muzaffargarh *tahsil*) is leased separately. An account of the fish caught has been given in Chapter I.

Section B.—Rents, Wages, and Prices.

Rents and wages.

A detailed account of classes of tenants and of rents paid will be found in section C. of Chapter III. The average rent rate for the whole district is 34·5 per cent., *i.e.*, a little over one-third. The rate is lightest in the Thal where the customary share is one-fifth and in some cases the tenants pay land revenue with no additional rent or with a nominal rent of *Solh Satarhi* Lichh, $\frac{1}{17}$th. In the canal-irrigated and riverain tracts, the rate varies from one-fourth + $\frac{1}{17}$th Lichh to one-half.

Cash rents are the exception rather than the rule, and are paid only on wells near the towns. Zabti rents, *i.e.*, cash rents according to the class of crops grown, are also rare.

CHAP. II.B.

Rents, Wages and Prices.

A light rent rate is generally taken when the tenant pays the occupier's rate. For instance, a tenant pays one-third *batai* if he pays the occupier's rate, but has to pay half of the grain if the landlord undertakes to pay the occupier's rate for the holding.

There is no tendency of produce rents being replaced by cash rents.

Labour.

There are no large labour centres. An account of agricultural and other labourers and their wages has been given in Section A of this Chapter. The village menials are paid in kind out of the common heap before the landlord and tenant divide the produce. The cash wages of labourers have been rising steadily, in consequence (1) of the rise in prices of food grain, and (2) of the largely enhanced demand for labour which is so much in requisition on the Railway and Canals.

Prices.

In paragraph 15 of the recent Settlement Report of the district, it was shown that, taken collectively, prices had risen nearly 14 per cent. compared with those on which the calculation for assessments were based by Mr. O'Brien at the first regular settlement. As has already been noted, the staple food grains of the district are wheat, *jowar* and *bajra*. Table 26 gives the prices ruling at the head-quarters of the district on 1st January of each year. The price of wheat now generally varies from 10 to 20 sers to the rupee. The rise in prices is due mainly to facilities of export afforded by the Railway. The extension of cultivation has, no doubt, increased the production of food grains, but the demand from outside is generally large and owing to the levelling influence of the Railway and Telegraph on prices, the rates are not regulated solely by local conditions. This district is not subject to famines, as the inundation canals, the wells and the floods in the two rivers invariably enable a certain amount of grain to be produced. Famines, in other parts of the country, no doubt affect the prices in this district.

Measures and weights.

The scale of linear and square measurement in use in the district is a convenient one, because it corresponds with the English measures.

Linear Measure.—Two paces ($5\frac{1}{2}$ feet) make one *karam*. A *karam* square is *sirsáhí*, which gives the unit of the local square measure.

Square Measure.—Nine *sirsáhís*=one marla=1 pole. Twenty marlas=one kanál=half rood. Four kanáls=1 bigha=half acre.

Grain in the towns is measured by the Government maund and its fractions, the *ser* and *chittak*. The villagers, however,

CHAP.II,B.

Rents, Wages and Prices.

Measures and weights.

compute grain by measure, not by weight. The measures are as follows :—

4 pán	make	1 paropi.	4 pais	make	1 chauth.
4 paropis	,,	1 topa.	4 chauths	,,	1 bora.
4 topas	,,	1 pai.	4 boras	,,	1 path.

The *path* being a measure and not a weight, the weight of grain contained in it fluctuates, of course, with the nature of the grain measured by it. Also, like most rustic measures, it varies somewhat in size in different parts of the country; but, roughly, it weighs from 27 to 30 maunds (the maund of 80 pounds). Other articles are measured by the maund and its parts. There is no *kachcha* or local maund in use in the district.

Material condition of the people.

An account of the style of houses and furniture has been given in Chapter I., Section C. There has been practically no difference in the habits or style of living of the typical peasant during the last quarter of a century. The middling landowners have, however, begun using finer English cloth. A zamíndar will, for instance, often wear a turban of coarse muslin and a jacket of longcloth instead of the local *khaddar*. Enamelled cups and tumblers are, however, finding their way gradually down to the peasants' houses. The crude tin burners consuming kerosine oil are also to be met with in a peasant's house and match boxes have come to be looked upon as a necessity, except in the Thal where people can still do without them and are quite content with producing fire by rubbing a cotton stick against Akk (Calotropis procera) roots. The middling and clerical classes are making rapid progress. A small table or a teapoy and a few chairs will often be found among a *munshi's* furniture, and a china or enamelled plate with a cup and tumbler to match, a kerosine oil lamp or a lantern are essential articles. His dress consists of nothing but fine cotton or fairly good though cheap woollen cloth. Oftener than not he wears shoes of English pattern and, if possible, of English make. The use of soap, comb and brushes and the like show distinctly an advancing standard of comfort. The well-to-do zamindars are not lagging behind either. Their dress has improved greatly and the use of imported and expensive articles is common. English saddles, English harness, traps, English guns and rifles are used largely, and the furniture of their houses includes a number of comparatively valuable things which twenty years ago were considered unwarranted luxuries. The style of houses in towns and large villages is improving. More attention is paid to ventilation and masonry houses are increasing in number. In short, the conditions of well-to-do zamindars and of townspeople of middling means show unmistakeable signs of progress. The landless labourer is by no means badly off. Labour is not so cheap and the artizans can earn enough to lead quite a comfortable life. The unskilled labourer does not get on so well, and his condition is about the same as that of a poor cultivator—perhaps a little worse.

Section C.—Forests.

CHAP. II, C.

Forests.

Forests.

The total area of Government Forests (Rakhs) in the district is 296,295 acres, of which 23 rakhs measuring 47,705 acres are under the management of the Forest Department, the remaining 50 rakhs with a total area of 248,590 acres being under the charge of the Deputy Commissioner. None of the forests is reserved and proposals to protect them under section 28 of the Forest Act 7 of 1878 were, after a good deal of correspondence, dropped as unnecessary in Senior Secretary to Financial Commissioner's letter No. 4227, dated 17th July 1907.

History of formation of the rakhs.

The following extracts from Mr. O'Brien's Settlement Report of the First Regular Settlement show how the rakhs in this district were formed :—

"The Government waste land deserves a mention here, only to avoid misunderstanding. If it were not for this, it would have no more part in an account of the physical geography than the small patches of Government cultivated land which there are in the district. The district is fairly well cultivated, and the cultivation, even in the Thal, is generally equally distributed throughout the country. The district does not, like the other districts of the Mooltan Division, consist of a fringe of cultivation on the banks of the rivers enclosing vast tracts of waste land. I don't suppose that in the extra Thal country at any time within the memory of man, a block of ten thousand acres of waste land, could have been discovered which was not intermixed with cultivation and habitations. In the Thal only, one block of 113,613 acres could with difficulty be formed into a rakh, and even that includes cultivated land. The misapprehension referred to is the idea that this district is similar to Mooltan, Jhang and Montgomery with their immense inland tracts of waste land. One of the greatest administrative mistakes that was ever made, and the disastrous effect of which has only just been removed, was to direct the waste land and grazing-tax in Muzaffargarh to be brought under the same system as that in force in the other districts of Mooltan Division. Similar mistakes are constantly occurring. The total area of the Government waste, by the statements of the settlement just concluded, is 311,554 acres.

As a part of the measurements, the Government rakhs were demarcated, and what had been a sore question since 1860 was finally decided. The demarcation of village boundaries was made, as has been stated, in 1856. It included within village boundaries all the waste land in the district. In 1860, Mr. Cust, then Financial Commissioner, in his letter No. 3342, dated 24th July, declared the boundaries open to revision. In 1861, in order to carry out this order, the Deputy Commissioner with a pencil marked off, on the revenue survey maps, pieces of land shown as waste, to form Government rakhs ; but no demarcation on the spot was made till 1879, when Sohan Lal, Extra Assistant Commissioner, was appointed to carry out the work. This demarcation followed rigidly the pencil lines of 1861, and the result was that much cultivated land, pakka wells, village sites, graveyards, public roads, and even canals, were included in the rakhs. In 1874 a re-demarcation was ordered. This has been carried out, and sanction was received to it in the correspondence noted in the margin. The area of rakh land is 311,554 acres. The Government rights in these have been secured, in almost every case, unincumbered by the inclusion of popular rights. The rakhs have been excluded from village boundaries and made into new rakh villages. A

Secretary to Government No. 948, dated 20th August 1877, to Secretary to Financial Commissioner; & Secretary to Government No. 685, dated 1st June 1878, to Secretary to Financial Commissioner.

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regular settlement record has been made for each rakh, the property of Government. No claims to rights of entry on the retained rakh, for any purpose except a few old rights of way, were either made or admitted. Where rights of way existed, the roads have been shown on the rakh shajra, and have been mentioned in the wajib-ul-arz. If the road was a main road, and the right of way public, this has been recorded, and if the right of way was restricted, the persons entitled to use it have been mentioned.

A separate record of rights was also prepared for each rakh at the Second Regular Settlement.

List of rakhs.

A list of rakhs under the charge of the Forest Department and the Deputy Commissioner is given below :—

Rakhs under the Forest Department.

Number.	Name of Rakh.	Area in acres.
1	Rakh Sohni	692
2	" Dandewala	931
3	" Rannuja	1,322
4	" Isan-wala	7,149
5	" Karimdad Kureshi	1,057
6	" Bakaini...	2,003
*	" Bet Mir Hazar Khan	1,301
7	" Chhina Malana	4,248
8	" Bet Diwán Sahib	3,171
9	" Dhaka	2,302
10	" Khanwah	1,695
11	" Ghiri	1,313
12	" Latti	729
13	" Khiyara	988
14	" Parara	588
15	" Dammarwala Janubi	3,069
16	" Sarwani Bela	1,522
17	" Khudái	2,542
18	" Jhalarin	1,984
19	" Alipur...	1,322
20	" Aliwali...	4,629
21	" Makhan Bela	943
22	" Jalwala	1,023
23	" Alipur	1,182

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Forests.
List of rakhs.

Rakhs under the Deputy Commissioner.

Number.	Name of Rakh.	Area in acres.
1	Rakh Thalwali	113,638
2	" Patti Siyal	5,457
3	" Ahsanpur	2,472
4	" Tibba	13,444
5	" Pattal Kot Adu	7,495
6	" Parhar Sharki	3,054
7	" Kat	524
8	" Drigh	1,935
9	" Khanpur	55,963
10	" Muhammad Bakhsh Kohawar	201
11	" Ahmad Bari	330
12	" Umar Budh	308
13	" Saban Machhi	646
14	" Kullewali	476
15	" Bet Ludda	1,060
16	" Ahmad Mohana	2,370
17	" Bet Kaim Shah	1,279
18	" Khulang Janubi	1,569
19	" Bet Mir Hazar Khan	2,282
20	" Thul Megh Raj	701
21	" Khairpur Parha	1,014
22	" Tibba Nur Gopang	565
23	" Bakar Shah Janubi	2,341
24	" Mohib Shah	628
25	" Kohar Piran	538
26	" Chandia	168
27	" Langarwah	866
28	" Missan Kot Bhoa	702
29	" Khinani	720
30	" Sultanpur	536
31	" Sarki	559
32	" Kotli Lal	591

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Forests.
List of Rakhs.

Number.	Name of Rakh.	Area in acres.
33	Rakh Kotla Sádát	561
34	„ Kunnal Sandíla...	498
35	„ Hamzewali	2,304
36	„ Basti Arif	1,698
37	„ Bilewala	854
38	„ Mela Chacha	488
39	„ Manakpur	723
40	„ Chitwahan	477
41	„ Jarh Ratheb	358
42	„ Harpallo	460
43	„ Hussanpur Kacha	1,383
44	„ Jogiwali	818
45	„ Daira Wadhu	289
46	„ Bastijarh	882
47	„ Sarkar No. 23	1,385
48	„ Sadewahán	671
49	„ Dera Haibat	1,223
50	„ Kaudiwal	9,136 "

Rakhs under Forest Department.

A note on the rakhs managed by the Forest Department, prepared by Mr. Shakespear of that department in 1883, has been brought up to date and is given below :—

"*Bet Isanwála*, 7,149 *acres*; *Dándewála*, 931 *acres*; *Bet Ranúja*, 1,322 *acres*; *Bet Sohni*, 692 *acres*.—A group of forests, in the vicinity of the Indus river, ten to twelve miles south-west of the *tahsíl* town of Sináwán. Under departmental supervision since 1877-78. Camels, goats and sheep excluded from browsing from same year. Grazed in by cattle of bordering villages. Trees—*Populus Euphratica* and *Tamarix* (small species), former very fine in Isanwála. A few *Sissu* also in this forest. *Saccharum* also found, particularly in Dándewála. This grass usually sold for a few rupees to Labánahs in neighbourhood; demand for wood very limited As few trees occasionally disposed of to villagers for domestic purposes. *Sailába* soil, and forest capable of much improvement.

"*Sarwáni Bela*, 1,522 *acres*.—A block of three forests close to the west bank of the Chenáb, about eight miles south of Rangpur. Under department since 1878. Cattle only allowed to graze from then. Very poor stock of material, soil improved by silt. A little *Prosopis* is found, chiefly along west boundaries near Thal.

"*Khudái*, 2,542 *acres*.—A block of two areas half way between Langar Sarái and Rangpur, about twelve miles from each, and close to

Bakhs under Forest Department.

right bank of Chenáb. Soil very poor—above the high bank—and growth very light. Fringe of *Prosopis* on Thal side. *Tamarix* of the smaller species predominates. Kikkar (*Acacia Arabica*) thrives in the *kacha*. Under department since 1869. Camels, goats and sheep excluded from 1878. Cattle of neighbouring villages graze on lease.

"*Jhalárin*, 1,984 acres.—On south of and close to above block, also near Chenáb. Poor soil and growth of *Tamarix* (small). *Prosopis* on Thal side, and a *Tamarix* (large) here and there. Under department since 1869, and closed to camels, goats and sheep from 1878. Cattle graze on lease.

"*Alipur*, 1,322 *acres*.—A block of three forests, long, narrow. South of Langar Sarái, about twelve miles north of Muzaffargarh, and five or six north-west of Sher Sháh, and about two to three from right bank of Chenáb. Growth very poor on the whole, though *Prosopis* fair in patches. *Saccharum* dense in centre and towards south. *Tamarix* of smaller species here and there. Under department since 1869. Only cattle admitted from 1878 on lease. The right to collect dates and cut *Saccharum* usually sold every year.

"*Kureshi*, 1,057 *acres*.—On the river Indus, left bank, and near main road from Muzaffargarh to Dera Gházi Khán. Under the department since 1878. Only cattle admitted from 1878. Growth of *Populus Euphratica*; dense in parts, and of various ages. Smallest *Tamarix* (*pilchi*) on river side. Soil *sailába*, and forest in good condition. Demand for material very limited.

"*Jálwála*, 1,023 *acres*.—Under department since 1878. About five miles south-west of Khángarh, and close to main road from Muzaffargarh to Alipúr *tahsil* town. Cattle-grazing only admitted on lease since 1878. Open to all kinds of animals formerly. Trees, *Prosopis* and *Tamarix*. No steady demand, and only a few *Tamarix* disposed of for village house-building. *Saccharum* grass heavy in parts; sold for a few rupees.

"*Makhan Bela*, 943 *acres*.—Under department since 1872. Two miles on east of main road from Muzaffargarh to Alipúr, and of police station Rohillánwáli. About four miles from right bank of Chenáb river. Soil poor as a rule; much *reh*. Trees, *Prosopis* and *Tamarix*, the smaller species. *T. Dioica* in low ground liable to flood. Open to all animals before 1878, and only to cattle since, on disposal of grazing lease.

"*Bakaini*, 2,003 *acres*.—A group of four forests, a few miles from left or east bank of Indus, between the towns of Kinjar and Jatoi. *Sailába* land,—forest good. *Populus Euphratica*, as a rule, mature. *Bakaini* under department since 1872; the remainder since 1877. Grazing unrestricted before 1878. Cattle only admitted from then. A small demand of trees for house-building met by selection.

"*Bet Mir Hazar Khan*, 1,301 *acres*.—Under department since 1872, and situated nearer Indus than preceding group; other conditions similar; *Saccharum* dense. Only half of the forest is under the Forest Department, the other half being managed by the Deputy Commissioner.

"*Chhina Malána*, 4,248 *acres*.—A group of four areas, close to Indus and nearer the town of Jatoi than Bet Mir Hazar, and on the south of that forest. Under department since 1872. Kot Ratta portion added on in 1878. *Populus Euphratica* and *Tamarix Dioica* predominate; the former of all ages. *Sissu* and *Acacia Arabica* here and there. Soil *sailába* and area intersected by *nallahs* from river. *Saccharum* heavy in places. Demand up to the present time not worth mentioning owing to extensive village waste lands. Grazing of all animals allowed before 1878; since then only cattle admitted.

CHAP. II,C.
Forests.
Rakhs under Forest Department.

"*Dammarwála Janubi*, 3,069 *acres.*—Two areas close to each other and near right bank of Chenáb. Also close on south of old Customs line from Jalálpur (Multán) to Jatoi. Madwála under department since 1877, and Dammarwála 1872; the former shows a mass of *Saccharum* grass on a sandy surface soil; while the southern portion of Dammarwála consists of *Populus Euphratica* of different ages, with heavy *Saccharum*. Camels, goats and sheep excluded since 1878, and grazing disposed of for cattle only. These forests have been burnt partially several times. Only a small demand for house-building material and firewood by neighbouring villages.

"*Aliwáli*, 4,629 *acres*; *Alipúr*, 1,322 *acres*.—Two blocks, each of three forests, both situated two to three miles on east of Alipúr *tahsíl* town in angle of roads therefrom to Jatoi and Sitpur. Of Aliwáli 2,238 acres under department since 1872, the rest added in 1877. Of Khiára 1,010 acres since 1872, and the rest added in 1877-78. All these areas are very poorly stocked, chiefly with inferior species of *Tamarix*. *Prosopis* found here and there. Soil *reh*. Grazing of destructive animals prohibited since 1878. A small demand for material by villagers.

"*Khiára*, 988 *acres*.—Similar to Aliwáli and Alipúr.

"*Látti*; 729 *acres*, *Ghiri*, 1,313 *acres*.—Látti adjoins one of the three plots under Ghiri, and is with it, very fair as to soil and growth of *Prosopis*, though this in clumps. Inferior *Tamarix* also present in low ground; the other two plots of Ghiri poor, and contain *Tamarix* with *reh* soil; a fringe of *Prosopis*, on east and west. *Saccharum* also in places. Both forests under department since 1878, and closed to camels, goats and sheep from then. No demands for wood.

"*Bet Dewán Sáhib*, 3,171 *acres*.—On the left eastern bank of the Indus, about twelve miles west of town of Sitpur, and 14 from Alipúr. Under department since 1872. Well stocked with *Populus Euphratica*, the predominating species. *Saccharum* in large quantity. Destructive animals excluded since 1878; cattle allowed to graze. Demand for wood very limited; some trees being occasionally sold for beams and rafters.

"*Khánwáh*, 1,695 *acres*.—About four miles from both Chenáb and Indus, and approaches main Sitpur and Dháka road on the west. Under department since 1877. Camels, &c., excluded since 1878, and only cattle allowed to graze. On the whole poor, containing few *Prosopis* and stocked with *lai* (*Tamarix*) chiefly. Demand for produce not worth mentioning.

"*Parára*, 588 *acres*.—Close to the Chenáb, and about three miles on east of road from Sitpur to Dháka. Under department since 1878. Only cattle admitted to graze from then. *Prosopis* growth good; ground hillocky but soil good. *Saccharum* grass plentiful, and sold for small sum. No demand for wood to speak of.

"*Dháka* 2,302 *acres*.—Two pieces, almost adjoining each other on north of Dháka and close to Indus left bank. A part under department since 1872; rest taken up in 1878. Only cattle allowed to graze since latter year. *Sailába*, and subject to flood. *Populus Euphratica* of all ages predominates. Inferior *Tamarix* also present in large quantity. *Saccharum* dense. No demand for wood to speak of.

"There is a large extent of either village waste land, or waste land attached to a village at Settlement for the convenience of the people, in the vicinity of many of the departmental forests; hence the requirements are often very limited. Grazing is always sought after. The right to *Saccharum* is sold by auction for nearly every area annually by the Forest Department; direct purchasers, as a rule, being Labána Sikhs, and the proceeds

CHAP. II.C.

Forests.

generally not reaching a high figure. The forests in this district not having been finally determined on for reservation, the demarcation has been confined to lines of various widths from 5 to 20 feet, with, in some instances, posts and trenching of an indifferent description."

Rakhs under the Deputy Commissioner

The rakhs in charge of the Deputy Commissioner may be divided into three classes:—

(1) *The Thal Rakhs.*—These Rakhs abound in Kanda (*Prosopis spicegera*), generally small, Jal (*Salvadora oleoides*), Kari (*Caparis aphylla*) and shrubs like Phog (*Calligonum polygonoides*), Babbal (*Acacia jacquemonti*) and Lana (*Anabasis multiflora*). A few Khaggal (*Tamarix orientalis*) trees are also found here and there;

(2) *Rakhs in the riverain tracts.*—These abound in Bhan (*Populus Euphratica*) and Lái (*Tamrix Dioica*); and

(3) *Rakhs in the central canal-irrigated tract.*—The trees in these Rakhs are mostly Khaggal (*Tamarix orientalis*), some Lái and a few Tahlis (*Sissoo*) and Kikkar (*Acacia Arabica*).

Grazing in these Rakhs is leased from year to year with reference to sums determined at settlement for each Rakh. Proposals made in 1904 regarding the grant of cultivating leases in some of the Rakhs are still under consideration.

Government lands.

Government owns cultivated and uncultivated lands in small plots in a large number of villages. The lands are held by tenants who pay land revenue with additional Malikana.

Section D.—Mines and Minerals.

Mines.

The district produces no minerals of importance. Earth-salt used to be manufactured, but this is now prohibited, and the production of saltpetre is also extinct.

Kankar is extracted, for burning lime, from some of the Government forests under the charge of the Deputy Commissioner on permits; but the quantity taken out and the income to Government are insignificant.

Section E.—Arts and Manufactures.

Cotton weaving

Common country cloth is woven in almost every large village. The ordinary cloth is white, but blue cloth with red or yellow stripes is also made for women's trousers and blue sheets with a red edging are prepared for wear as *manjhlas*. A kind of counterpane is also made usually black and white, in chequers, the portion which is white on one side being blue on the other and *vice versâ*.

Silk weaving.

No weaver in the district knows silk weaving.

CHAP. II, E.

Arts and Manufactures.

Printing in fabrics.

Chhímbás (dyers) print cloth in showy colours with a view to its being used as *bhochhan* (sheet worn by women on the head), *ghagra* (petticoat), cloth for quilts (*sirak*), or *jázam* (flooring cloth).

Carpets.

No carpets are manufactured in the district.

Rugs.

Country blankets are woven by the local weavers out of sheep's wool. No other kind of rugs are made.

Snuff.

Snuff is manufactured more or less throughout the district, but the chief seat of the manufacture is at Alipur where there are regular mills and large quantities are prepared for export to Dera Ghazi Khan and Bahawalpur.

Taddi (matting.)

Taddi (matting) is made of date leaves by Kirárs in every part of the district. Mr. Lockwood Kipling, late Principal of the School of Arts, Lahore, wrote as follows about this manufacture :—

Basket-work —Rampur.

"Rampur in this district and probably elsewhere, mats and baskets made of *pattha*, leaves of the Afghan dwarf palm (*Chamoerops Ritchiana*). These last are not basket-work in the strict sense of the term, *i. e.*, an interlacement of twigs; but they are built up like the rope seed-buckets of the Deccan, or the similar articles from the Zanzibar coast, in a series of coils tightly plaited together; usually in the shape of large *gharas* and *lotas* with well-fitting covers. Similar work in the same material is made in the Bannu district, while the wheaten straw plaiting of Hazára is another variation of the same principle. All this work is exceedingly neat and wonderfully cheap."

Bows and arrows.

The primeval trade of bow and arrow making still lingers in the district. The place well known for its pretty bows is Kot Addu in the Sinawan *tahsil*. Bows are made of horn and brushwood chips tied up with gut and leather. Each bow takes six months to complete. When ready it is very strong and difficult to bend. The bows are beautifully decorated in colour with foliated patterns in tin, yellow varnished to simulate guilding or left white like silver. This method of decoration is called *kamángari* and the artizans are called *kamángars*. Each *kamángar* prepares two lots of bows in a year, one lot being ready every half-year. The bows are *eknábi*, *donábi* and *senábi* according as the bow has one, two or three furrows at the back. Each furrow adds to the strength of the bow. The price of a bow is from Rs. 4 or 5 to Rs. 8 or 10. Arrows with pointed lips are not prepared unless ordered. The arrow used by the local people for shooting birds is of peculiar shape having a thin end and a thick and heavy front. It is held slanting against the bowstring and when discharged flies erect.

Other industries.

No other industries are deserving of notice.

CHAP. II. E.

Arts and Manufactures.

Cotton Factories.

A cotton ginning factory belonging to Seth Chiman Das and Co., has been in existence at Muzaffargarh for about ten years. It is, however, not a very large concern. The number of workmen employed is about 40, and work has often to be stopped when there is not enough cotton to be had. Similar factories have been started lately on the Muzaffargarh-Alipur road at Khangarh, Wasandewala and Rohillanwali. The Muzaffargarh factory has also a cotton press attached to it. A second ginning factory has also been opened at Muzaffargarh.

Other factories.

No other factories are deserving of the name. Leather tanning goes on at almost every large village. But the *mochis* follow the old crude methods of curing skins with lime and tanning them with the bark of *kikár* (acacia arabica). The trough is called *kunál* and skins filled up with the tanning fluid are hung to trees or wooden posts erected for the purpose.

Wool is exported mostly to or *via* Multán. A little is spun by women at home and converted into blankets (*dhussá*).

Rope-making is an important industry which is entirely in the hands of Labana Sikhs. They buy up *munj kana* (saccharum munja) and beat the bark of the reed (*munj*) into fine fibres. These fibres are then twisted together on a kind of spindle and made into ropes. Ropes are used locally and also exported.

Effect of factories on internal migration.

The factories are not sufficiently numerous or large to necessitate migration of labourers. The small demand of labour is supplied locally. Labourers work nine or ten hours a day and receive from six annas to one rupee a day at Muzaffargarh.

Section F.—Commerce and Trade.

Commerce and trade.

The mercantile classes of this district are not noted for a spirit of enterprise; and though ready enough to invest their money in loans upon the security of land mortgages, or to sink capital in agricultural improvements, such as wells, water-courses, &c., they display a remarkable apathy in the matter of distant trade. The district accordingly has few commercial transactions of any magnitude, and any distant trade is carried on not by resident merchants, but by traders from Multan and Sukkur who visit the district and buy up agricultural produce from the local traders for export to Sukkur by river or *via* Multan by rail. The chief exports of the district are wheat, sugar, cotton, indigo, *ghi* (clarified butter), dates, mangoes and snuff. The cultivators dispose of their surplus produce to the petty dealers of the small towns and villages, who again pass them on to the exporting merchants. A good deal of trade used to be carried on by Powindah merchants with Afghanistan and Central Asia, and they used to buy up the bulk of the indigo at the end of the cold

CHAP. II, F.

Commerce and Trade.

weather and take it to Khurasan. But the trade is now almost extinct owing to prohibitive duties imposed in Afghanistan. Some of the sugar goes to Dera Ghazi Khan and the snuff is sent out to the same district and Baháwalpur. The rest of the trade is in the hands of Multán or Sukkur merchants and the surplus produce either goes by rail to Multan or by river down to Sukkur.

The chief imports are cotton and woollen piece-goods, metals, salt and lime.

Castes engaged in trade.

The local traders are all Aroras by caste. In the days of trade with Afghanistan a few well-to-do Pathans used to join the Powindahs and take indigo for sale to Central Asia. They have, however, given it up now.

Centres of trade.

Khairpur (*tahsil* Alipur) used to be a flourishing centre of trade in the old days. It had the advantage of the river Indus running up to it in summer and making it a convenient station for boat traffic. The local traders had direct dealings with Amritsar and Sukkur and used to export large quantities of gram to Sukkur by boat. The diversion of traffic to the Railway and the construction of protective embankments which keep out the river water have now turned the tables upon the town and the dilapidated condition of the masonry buildings show that this once prosperous town is now in straits. Every railway station from Daira Din Panah to Muzaffargarh is now an exporting centre. Indeed goods are booked even from flag stations.

Modes of carriage.

Wheeled traffic is practically unknown. There are just a few bullock-carts in the district, but they are used either for carrying sugarcane from the fields to the presses or by contractors for conveying heavy beams and other building materials. Camels are the usual means of transport and they can travel not only along the main roads but along all sorts of footpaths. Pack bullocks and donkeys are also used to some extent. Tumtums ply on the metalled road between Khangarh and Muzaffargarh carrying large quantities of mangoes and dates to the railway station. A subsidized Tonga service carries the Dak and passengers between Alipur and Muzaffargarh, and tumtums are often requisitioned by officers and well-to-do local men for trips along the roads.

Section G.—Means of Communication.

Means of communication—Railways.

The Sindh Sagar branch of the North-Western Railway, which was built in 1886, enters the district from Sher Shah (Multan) by a bridge over the Chenab and runs through the northern half of the district turning northwards along the east bank of the Indus. From Mahmudkot a branch runs off to Ghazi Ghat, opposite Dera Gházi Khan. The distance between the two places is about nine miles and communication across the river is kept up by means of a bridge of boats in winter and ferry steamer

CHAP. II.G.

Means of Communication.

in summer. The railway stations starting from the east are :— Chenab west bank, Muzaffargarh, Budh (flag station), Mahmudkot (junction), Gurmani (flag station), Sinawan, Kot Adu, Daira Din Panah and Ihsanpur (flag station).

This district is not subject to famines, but the railway has raised the prices more or less. It has had no effect upon the language or religion.

Roads.

There are only two bits of metalled road (1) a distance of eleven miles between Muzaffargarh and Khangarh, and (2) a bit six miles long on the Muzaffargarh-Dera Gházi Khan road, west of the Muzaffargarh station, another bit three miles in length east of the town besides the roads round the Muzaffargarh civil station. The former road is under the District Board, but the latter is under the charge of the Public Works Department.

The following is a list of the roads under the management of the District Board :—

1. Muzaffargah-Rangpur road (district boundary terminus).
2. Muzaffargarh-Ahsanpur road (district boundary terminus).
3. Kot Adu Langarsarai road.
4. Sinawan-Munda road.
5. Kot Adu-Munda road.
6. Daira Din Panah-Rangpur road *via* Munda.
7. Sinawan-Kureshi road.
8. Mahmudkot-Dera Ghazi Khan ferry road.
9. Sinawan-Khangarh ferry road *via* Kinjhar.
10. Muzaffargarh-Kinjhar road.
11. Muzaffargarh-Dhaka road.
12. Kinjhar-Jatoi road.
13. Shahr Sultan-Jatoi road.
14. Jatoi-Alipur road.
15. Jatoi-Khairpur road.
16. Aludewale-Jatoi road.
17. Jatoi-Dhaka road.
18. Jatoi-Mudwala road.

The total mileage of these roads is 556, including 11 miles of metalled road. The Sher Shah-Dera Ghazi Khan road is in charge of the Public Works Department.

No roads have been transferred from the local to the provincial authorities.

With the exception of roads Nos. 2 and 8 which are still used by troops on march, all the roads are no more than feeders to the railway so far as traffic coming to railway station is concerned.

Rest-houses.

A complete list of rest-houses is given in Table XXIX, Part B. The police rest-houses are generally old buildings, more or less dilapidated with chimneys out of order and roofs fit for being renewed. Most of the canal rest-houses are new and nicely built and are very comfortable.

CHAP. II.G.
Means of Communication.
Inland navigation.

There are no navigable canals in the district. The creeks in the riverain tracts have to be crossed by ordinary boats which are supplied on the main roads by ferry contractors. In some of the inland creeks, small boats are kept for the purposes of fishing.

The ferries on the Indus are managed by the Dera Ghazi Khan district authorities. Ferries on the Chenab are under the Deputy Commissioner of Muzaffargarh. A list of the Chenab ferries is given below :—

1. Bullewahan.
2. Dholanwala.
3. Dhunduwala.
4. Tibbewala.
5. Ganga.
6. Binda Ishak.
7. Shahpur.
8. Shahr Sultan.
9. Mudwala.
10. Bhakri.
11. Makhan Bela.
12. Kundrala.
13. Nurwala.
14. Khangarh Doma.
15. Jhokwala.
16. Hiranwala.
17. Bet Isa.
18. Mud Daulat Shah.
19. Nahranwala.
20. Arewala.
21. Chuharpur.
22. Rajghat.
23. Pipli.
24. Hamandpur.
25. Mohanwala.
26. Taragranwala.
27. Alipur.
28. Jatoi.

The income from lease of the ferries was Rs. 4,970 in 1905-06 and Rs. 9,728 in 1906-07.

Postal arrangements.

The postal arrangements of the district are under the charge of the Superintendent, Post Offices, Multan. Besides Muzaffargarh which is the head office of the district, there are sub-offices at Alipur, Khangarh, Kot Adu and Sinawan, with a number of branch offices attached to each. The following is a list of the branch psot offices :—

Sub-office.	Branch offices.
Muzaffargarh	Alipur, Amirpur Kanakka, Chenab West Bank, Langar Sarai, Moradabad, Nunari, Rangpur, Rampur, Saidpur, Samti.
Alipur	Jatoi, Jhuggiwala, Khairpur, Khangarh Doma, Kundai, Sitpur, Dummarwala, Jhok kharak, Kinjhar, Mochiwali, Rohillanwali, Shahr Sultan.
Kot Adu	Ahsanpur, Daira Din Panah, Munda.
Sinawan	Basira, Daya Chokha, Dogar, Gujrat, Gurmani, Mahmud Kot, Mannan, Kureshi.

The post is transmitted by rail along the Railway line and by Tonga from Muzaffargarh to Alipur. In all the other parts of the district it is carried by Dak-runners.

The number of post offices is increasing day by day. The progress made by the post office as a means of transmission of letters and money may be judged from the fact that in the twelve years preceding 1902-03 the number of letters passed rose from three to five hundred thousand, and the number of money orders sent and paid grew from 5,349 and 549 to 10,879 and 5,133 respectively.

CHAP. II, G

Means of Communication.

Telegraph offices.

There is only one combined post and telegraph office in the district at Muzaffargarh. Telegraphic messages can, however, be sent along the railway line through the Railway Telegraph. The canal department have also set up a telegraph line along the rest-houses situated on the main canals. Alipur, Jatoi and Kinjhar have also thus been placed within reach of telegraphic messages, though only for official purposes.

Section H.—Famine.

Famine.

Cultivation in this district depending on one form or another of irrigation, it is practically immune from famine. The area matured in the famine year of 1899-1900 was 84 per cent. of the normal. No famine works have had to be started within recent years. Large numbers of people, however, flock into this district from Bikaner (through Bahawalpur) when that tract is passing through a famine. They spread out and can usually find employment for able-bodied persons and alms enough to keep the others alive.

CHAPTER III—ADMINISTRATIVE.

Section A.—Administrative Divisions.

CHAP. III, A.

Administrative Divisions.

General.

The district is in charge of a Deputy Commissioner, subject to the control of the Commissioner of Multan. The ordinary district staff consists of a District Judge, a Treasury Officer and a Revenue Extra Assistant Commissioner. An additional Extra Assistant Commissioner is posted to the district for six months from 15th October to 15th April.

Magistrates.

The Deputy Commissioner is also the District Magistrate and all Extra Assistant Commissioners have first class magisterial powers. The Tahsildars and Naib-Tahsildars are also magistrates of the 2nd and 3rd class. The official magisterial staff is assisted by the following Honorary Magistrates:—

1. Khan Bahadur Muhammad Saifulla Khan, Magistrate, 1st class ... ... Khangarh.
2. Maulvi Ghaus Bakhsh, Magistrate, 1st class Alipur.
3. Mian Shaikh Ahmad, Magistrate, 1st class Thatta Gurmani.
4. Makhdum Shaikh Muhammad Hasan, Magistrate, 2nd class ... ... Sitpur.
5. Shaikh Ghaus Bakhsh, Qureshi, Magistrate, 3rd class ... ... Muzaffargarh.

There is a Town Bench of Magistrates for the town of Muzaffargarh exercising 3rd class powers. It consists of:—

1. Chaudhri Parma Nand.
2. Bhai Notan Das.
3. Makhdum Ghulam Mustafa.
4. M. Khaliq Dad Khan of Khangan.

Revenue Staff.

For revenue purposes each of the three tahsils is in charge of a Tahsildar. In the Alipur tahsil there are two Naib-Tahsildars with head-quarters at Alipur. For the Muzaffargarh tahsil there are two Naibs, but the 2nd Naib-Tahsildar has his head-quarters at Rangpur. In the Sinawan tahsil there is only one Naib-Tahsildar. An extra Naib-Tahsildar is posted to each of the Sinawan and Muzaffargarh tahsils for girdáwari work for two months in *kharif* and 1½ month in *rabi*. The village revenue staff is as follows:—

Tahsil.	Office Kanungos.	Field Kanungos.	Patwaris.	Assistant Patwaris.
Muzaffargarh	1	9	115	6
Alipur	1	8	90	5
Sinawan	1	5	65	4
Total	3	22	270	15

CHAP. III. A.

Administrative Divisions.

This establishment is under the supervision of the Naib-Tahsildars, the Tahsildar, and the Revenue Extra Assistant Commissioner, assisted by a District Kanungo who has his headquarters at Muzaffargarh. The district revenue record-room is in charge of an Assistant District Kanungo helped by an inspection muharrir and an assistant inspection muharrir. The establishment is under the supervision of the District Kanungo.

Police.

There are 14 police stations or Thanas in the district. The sanctioned strength of Inspectors and Sub-Inspectors is 5 and 20 respectively.

The police arrangements are in charge of a Superintendent of Police, subject to the control of the Deputy Commissioner.

Jails.

There is no jail in the district. Prisoners are sent to the District Jail, Multan.

Court of Wards.

The Deputy Commissioner is the Court for management of the estates of all wards taken under Government charge.

Village autonomy.

The village communities show no signs of organisation among them. For a decision of the pettiest dispute they rush to Law Courts, except when the lambardar who is after all a power in the village can arrange a settlement.

Zaildárs.

Zaildárs were appointed in this district at the commencement of the first Regular Settlement. They were remunerated by a deduction of one per cent. from the revenue of their Zails and by special *Ináms.* There were 51 Zails at that settlement with 59 Zaildárs, some of the Zails being shared by two Zaildárs. The number of Zails has now been reduced to 45 and they have been reorganised so that every Zail will be in charge of one Zaildár and every Zail will fall wholly within one Thána. Great inconvenience used to be experienced in consequence of a Zail being situated within the boundaries of two or three Thánas. With a view to secure the latter end the limits of Thánas had to be slightly altered in some cases, and the alterations were duly sanctioned by Government (*vide* Notification No. 19, dated 26th January 1903). It has been arranged to remunerate the Zaildárs by fixed pay, in three grades, thus :—

	Per annum.
	Rs.
1st grade	200
2nd „	150
3rd „	100

Some of the Zaildárs, whose emoluments had been much larger than the pay now fixed for them, have had to be remunerated by special compensation *Ináms* which will be resumable at their death or vacating office, except in special cases when they may be continued to their successors under the orders of Government. The pay of the Zaildárs will be somewhat less than one per cent.

CHAP. III, A
Administrative Divisions.
Zaildars.

of the estimated future revenue of the district, but including the compensation *Ináms* the total emoluments of Zaildárs will be a little larger. There are two *Ináms* held on special terms under the orders of Government. The following table gives the figures :—

Tahsil.	Number of Zails. 1st class.	2nd class.	3rd class.	Total Pay.	Compensation Ináms.	Special Ináms.	Total present emoluments of Zaildars.
				Rs.	Rs.	Rs.	Rs.
Sinánwán	3	6	...	1,500	250	50	1,800
Muzaffargarh	9	2	7	2,800	775	150	3,725
Alipur	2	5	11	2,250	400	...	2,650
District	14	13	18	6,550	1,425	200	8,175

The re-organization of Zails and the scheme for remunerating the Zaildárs were sanctioned by the Punjab Government in their Revenue and Financial Secretary's letter No. 1, dated the 13th January 1903. The appointment, promotion, &c., of Zaildárs will be regulated by general rules contained in No. 173-A of the rules under the Punjab Land Revenue Act.

The following is a list of Zaildárs who held office on 1st June 1908 :—

Serial No.	Name of Tahsil.	Name of Zaildár.	Name of Zail.	REMARKS.
1	Muzaffargarh ...	M. Khán Beg	Amírpur Kanaka.	
2	Do. ...	M. Salem	Rangpur.	
3	Do. ...	M. Ali Muhammad ...	Murádábád.	
4	Do. ...	M. Khuda Bakhsh ...	Thatta Siyálán.	
5	Do. ...	Sh. Allah Bakhsh ...	Muzaffargarh.	
6	Do. ...	Sh. Ghaus Bakhsh ...	Thatta Qureshi.	
7	Do. ...	Ghulám Qádir Khán ...	Khángarh.	
8	Do. ...	S. Lál Shah	Mondka.	
9	Do. ...	M. Nizam Dín	Ali Dahá.	
10	Do. ...	Fateh Muhammad Khán...	Qalandarwálá.	
11	Do. ...	M. Sultán Mahmúd ...	Sharíf Chhajra.	
12	Do. ...	M. Ghulám Muhammad...	Kinjhar.	

CHAP. III, A.
Administrative Divisions.
Zaildárs.

Serial No.	Name of Tahsil.	Name of Zaildár.	Name of Zail.	REMARKS.
13	Muzaffargarh ...	M. Ahmad Ali	Diwála.	
14	Do. ...	M. Ghulám Rasúl ...	Uttera Sindila.	
15	Do. ...	M. Karím Dád	Mahra.	Died on 11th April 1908. Successor not appointed yet.
16	Do. ...	M. Wali Muhammad ...	Ruhillánwáli.	
17	Do. ...	M. Allah Yar	Mochiwáli.	
18	Do. ...	Khuda Bakhsh Khán ...	Ghazanfargarh.	
19	Alipur	Hafiz Muhammad ...	Dammarwála Shumáli.	
20	Do.	Diwán Sultán Ahmad ...	Shahr Sultán.	
21	Do.	Gul Muhammad	Bilewálá.	
22	Do.	Mir Hazar Khán... ..	Bet Wáriyánwálá.	
23	Do.	Said Khán	Jatoi Shumáli.	
24	Do.	K. S. Ghulám Rasúl Khán.	Jatoi Janúbi.	
25	Do.	Sher Muhammad Khán ...	Jhalárin.	
26	Do.	M. Jind Wada, Panúhán...	Madwála.	
27	Do.	Allah Wasáyá	Dammarwála Janúbi.	
28	Do.	Lál Khán	Bet Mullánwáli.	
29	Do.	Bande Shah	Bande Shah.	
30	Do.	Pallú Khán	Alipur.	
31	Do.	Umar Khán	Khairpur Sáúdát.	
32	Do.	Pir Bakhsh	Ghiri.	
33	Do.	Amír Ahmad	Sítpur.	
34	Do.	Ali Muhammad Khán ...	Bhímbri.	
35	Do.	Umar Wada	Khánpur Naraka.	
36	Do.	Azim Shah	Dhaka.	
37	Sináwán ...	Yár Muhammad	Tibba.	
38	Do. ...	Ali Muhammad	Pattal Kot Addu.	
39	Do. ...	Barkhurdár	Pirhár Gharbi.	
40	Do. ...	M. Kaurú, Qureshi ...	Sheikh Umar.	
41	Do. ...	Ghulám Rasúl	Sináwán.	
42	Do. ...	M. Fateh Muhammad ...	Khar Gharbi.	
43	Do. ...	M. Sheikh Ahmad ...	Thatta Gurmáni.	
44	Do. ...	H. Muhammad Khán ...	Khuáwar.	
45	Do. ...	Amolak Rám	Gujrát.	

CHAP. III. A.
Adminis-trative Divisions.
Inámdárs.

The *ináms* granted to Zaildárs at the first Regular Settlement amounted to ·59 per cent. of the total revenue of the district. Zaildárs having now been remunerated by fixed pay and compensation *ináms*, 23 *zamíndári ináms* of the aggregate value of Rs. 1,325 per annum have been sanctioned by the Punjab Government in their Revenue and Financial Secretary's letter No. 1, dated 13th January 1903, referred to in the preceding paragraph for grant to other deserving lambardárs and influential landowners. The *ináms* have been graded as follows:—

	Per annum. Rs.
1st grade	75
2nd "	50
3rd "	25

They have been distributed by Tahsils thus—

Tahsil.	Number of ináms.			Emoluments.
	1st grade.	2nd grade.	3rd grade.	
				Rs.
Sinánwán	2	6	...	450
Muzaffargarh	...	8	2	450
Alipur	...	8	1	425
District	2	22	3	1,325

NOTE.—Two 3rd grade ináms were transferred from Sináwán to Muzaffargarh by Punjab Government letter No. 172, dated 13th August 1903.

The *ináms* amount to less than one-fourth per cent. of the total revenue of the district. The amount has been kept low in consideration of the compensation *ináms* which have been granted to the Zaildárs. Rules 171 and 173 under the Land Revenue Act relating to *Inámdárs* have been extended to this district by Punjab Government Notification No. 2, dated 13th January 1903. The *Ináms* will be confined to the *Tahsils* for which they have been sanctioned. Each Inámdár and Zaildár has been provided with a book of convenient size containing a list of villages included in the Zail, a map thereof, a printed paper showing their duties and blank papers for the remarks of the Collector or other officers above the rank of Tahsildar when they go out on tour.

A list of persons who held the *Sufedposhi Ináms* on 1st June 1908 is given below:—

Serial No.	Name of Tahsil.	Name of Sufedposh.	Name of Village.	REMARKS.
1	Muzaffargarh ...	Sadhan Mal, Handuja ...	Dhiranwálá.	
2	Do. ...	Makhdum Karam Husain, Saiyad.	Dera Fázil.	

CHAP. III. A.

Administrative Divisions.

Inámdárs.

Serial No.	Name of Tahsil.	Name of Sufedposh.	Name of Village.	REMARKS.
3	Muzaffargarh. ...	Gahna, Diwála ...	Diwála.	
4	Do. ..	Khaliq Dad Khan, Pathan	Khanghin Shumáli.	
5	Do. ...	Ghulam Ali, Jangla ...	Mehrpur.	
6	Do. ...	Gulab Shah, Saiyad ...	Rangpur.	
7	Do. ...	Imam Bakhsh, Chhichhra	Doába.	
8	Do. ...	Yar Muhammad, Samti ..	Samti.	
9	Do. ...	Muhammad Hanif, Khudái	Khudái.	
10	Do. ...	Allah Wasáyá, Qureshi ...	Karim Dad, Qureshi.	
11	Do. ..	K. B. Muhammad Saifullah Khán, Pathan.	Khángarh	Special Inám.
12	Alipur	Azim Shah, Saiyad ...	Bet Burra and Latti.	
13	Do.	Allah Dad Khán, Jatoi ...	Jatoi Janúbi.	
14	Do.	Ján Muhammad, Missan...	Khánwah.	
15	Do.	Makhdum Sheikh Muhammad Hasan.	Khinani.	
16	Do.	Murád Shah Saiyad ..	Shahr Sultan.	
17	Do.	Sahju Ram, Bhutna ...	Do.	
18	Do.	Faqir Shah, Saiyad ...	Ghalwan.	
19	Do.	Muhammad Ghaus Shah, Saiyad.	Kotla Sultan Shah.	
20	Do.	Maulvi Ghaus Bakhsh, Titri.	Sarki.	
21	Sináwán ...	Muhammad Bakhsh, Uttera	Bet Uttera Alipur.	
22	Do. ...	Allah Bakhsh, Chandiya...	Pattal Munda Chak Janúbi	
23	Do. ...	Ghulám Qásim	Dáira Dín Panáh Mustaqil	
24	Do. ...	M. Muhammad Zamán, Gurmáni.	Isanwálá.	
25	Do. ...	Fateh Muhammad Khuáwar.	Khuáwar.	
26	Do. ...	Remal Das, Nangpál ...	Gurmáni.	
27	Do. ...	Mahmud, Hinjrai ...	Hinjrai Mustaqil.	
28	Do. ...	Muhammad Yar, Khar ...	Bet Angra.	
29	Do. ...	Mian Sheikh Ahmad, Gurmáni.	Thatta Gurmáni	Special Inám.

Lambardárs.

A few alterations in the number of lambardárs were made during recent settlement operations. No radical changes in the lambardári arrangements were made except that instead of the *sarpanches* who were responsible for turning out statute labour and were remunerated for the work by remission of labour in their favour, the lambardárs have now been made responsible for the recovery of the occupiers' rates, and will get from the treasury a fee of 3 per cent. on the collections. For the collection of land revenue the lambardárs are remunerated by a 5 per cent. cess recovered from revenue-payers in addition to land revenue. A scheme for the gradual reduction of lambardárs has been prepared for each *Tahsil,* but with reference to the remarks contained in paragraph 63 of the final Settlement Report of Multan regarding the views of the Financial Commissioner on the subject, it was considered unnecessary to submit the scheme for approval. It will be available for the Deputy Commissioner's reference when the time comes for taking up each case, and he can go up for sanction if he considers the course advisable with regard to the circumstances then existing.

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Civil and Criminal Justice.

Section B.—Civil and Criminal Justice.

Criminal.

The criminal statistics of the district show no important features. Petty thefts and cattle lifting are common. The number of murders fell from 16 in 1906 to 9 in 1907. With solitary exceptions, murders can invariably be traced to jealousy or intrigue, and a woman is almost always at the bottom of the whole thing.

The standard of morality being low, cases of abduction are very numerous. There were as many as 212 cases relating to marriage in 1906. Of the complaints instituted very few are successfully prosecuted, the acceptance of consideration for, or the return of, the abducted woman being generally taken as sufficient to warrant a compromise.

Civil.

This is not a very litigious district. Suits for money and moveable property are common.

The civil courts in the district are as follows :—

The Court of District Judge.

Three Courts of Extra Assistant Commissioners with civil powers of Munsiff, 1st class.

Three Courts of Munsiffs (one at Alipur and 2 at Muzaffargarh) exercising the powers of Munsiff, 2nd class.

Of the two Munsiffs at Muzaffargarh one is an Additional Munsiff and is permanently located there.

The Munsiff of Alipur has the Alipur *Tahsil* for his jurisdiction. The jurisdiction of the other two Munsiffs stationed at Muzaffargarh extends over the Muzaffargarh and Sináwán *Tahsils* as well as over part of the Alipur *Tahsil*, *viz.*, the tract lying within the limits of the Shahr Sultan police station.

Three Courts of Tahsildars (exercising 3rd class Munsiff's powers). Their jurisdiction is confined to their respective *Tahsils*.

Two Courts of Honorary Civil Judges, *viz.* :—

(*i*) Khan Bahadur Muhammad Saifulla Khan, exercising powers of Munsiff, 2nd class, within the local limits of the Khángarh police station (*vide* Punjab Gazette Notification No. 983, dated 22nd August 1903).

(*ii*) M. Ghaus Bakhsh, exercising powers of a Munsiff of the 3rd class within the limits of the Alipur *Tahsil* (*vide* Punjab Gazette Notification No. 566, dated 8th April 1902).

The powers of District Judge are exercised by an officer other than the Deputy Commissioner. He is usually a member of the Provincial Service, generally an Extra Judicial Assistant. There is no Subordinate Judge.

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Civil and Criminal Justice.

The district is included in the Multan Civil Division and the District Judge is for purposes of civil work subordinate to the Divisional Judge, Multan.

There is no Additional Divisional Judge for this district.

Civil.

A code of the customs prevailing in the district, was compiled during the recent settlement of the district and is printed as Volume XX of the Punjab Customary Law Series.

There are five pleaders and one *Mukhtar* (who is also revenue agent) at head-quarters and one pleader at Alipur.

There are 30 petition-writers in the district, the scale sanctioned by the Chief Court being 35.

Registration.

The Deputy Commissioner is *ex-officio* Registrar. There are three offices, one in each *Tahsil*, and the following are the Departmental Sub-Registrars :—

Mian Sheikh Ahmad at Thatta Gurmáni for Sináwán.

Sheikh Ghaus Bakhsh, Qureshi, at Muzaffargarh.

Maulvi Ghaus Bakhsh, at Alipur.

The passing of the Land Alienation Act has considerably reduced the number of registrations.

Section C.—Land Revenue.

(a) Village communities.

The following table gives a classification of the villages in the district according to tenures :—

Village tenure.	Tahsils.			District.
	Sináwán.	Muzaffargarh.	Alipur.	
Bhayyachára Mukammal	86	353	111	550
" Ghair "	32	8	62	102
Zamindári	15	33	30	78
" Bil Ijmal	16	12	4	32
Pattidári	1	6	...	7
Total	150	412	207	769

Practically every well in the district constitutes a separate estate, and it is for administrative purposes that a number of wells have always been grouped together under the name of a village.

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Land Revenue.

(a) Village communities.

In some places there never was any land common to the wells, in others where there was some common grazing land it has been partitioned and now each well has a waste area of its own. The great majority of villages is accordingly held on the tenure called *bhayyachára mukammal* (complete) which means that the possession of each owner or group of owners is the measure of their rights; in other words, that the wells or holdings are quite independent of one another and have nothing in common. Next in importance comes the tenure called *bhayyachára ghair mukammal* (incomplete), where there is some village *shamilat* (common land). The number of such villages is largest in the Alipur *Tahsil* where the extensive river front prevents a partition of the common riverain lands. In the Sináwán *Tahsil*, too, the extensive waste area of the Thal has so far been found useful for the grazing of cattle without restriction.

With the exception of the Thal villages where no partition can take place in consequence of the agreements executed under the Sindh Sagar Doab Colonization Act, the villages of this class are being converted gradually into *bhayyachára mukammal* as individual rights are asserted more and more. Of the *zamindári* villages, 14 in Sináwán, 29 in Muzaffargarh and 30 in Alipur, or 73 in all, are *rakhs* (forests) belonging to Government. There are thus only 5 real *zamindári* villages belonging to one individual in each case, and there are 32 villages where the villages are shared by a few members of the same family or more families than one. The *pattidári* tenure is rare. The few villages classed under that head were formed more by throwing into one village areas held by different groups of proprietors, than by the area of the village being colonized in defined sub-divisions. The following extract from the old Gazetteer will be found interesting:—

"But the significance of the figures is more than doubtful. It is in many cases simply impossible to class a village satisfactorily under any one of the ordinarily recognised tenures; the primary division of rights between the main sub-divisions of the village following one form, while the interior distribution among the several proprietors of each of these sub-divisions follows another form which itself often varies from one sub-division to another. Especially is this the case in Muzaffargarh, where the village communities are not, as a rule, compact family groups, the members of which claim descent from a common ancestor, but fortuitous aggregations of units, whom circumstances, rather than nature, have brought together. Owing to the mode in which inferior proprietorship was formed, *viz.*, by settling individuals to till the land, it follows that most villages are mere collections of wells grouped together for revenue purposes, but not really knit together in any way, and that the only real bond in many cases between the members of a village community in this district, is the artificial bond, imposed by our Government, of joint responsibility for the land revenue. To such communities as in Multán, so here, neither of the terms *pattidári* or *bhayyachára* can in their original significance be applied with propriety. The technical sense, however, of the term *bhayyachára*, which is used to express a state of things where possession, and not ancestral descent, is the measure of right and liability, seems to apply more nearly

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Land Revenue.

(a) Village communities.

than the term *pattidári*, which implies that ancestral right, as derived from a common ancestor, is the rule by which each man's share in the village lands is determined. The process by which the existing state of things was arrived at, differs materially from the process implied in the terms *pattidári* and *bhayyachára*; but looking at results alone, it is possible to apply the term *bhayyachára* in its technical sense to these villages. The extent of each man's possession is the measure of his rights in, and liabilities on account of, the village; and this is practically the essential feature of the *bhayyachára* tenure.

These remarks apply to the majority of village communities, but not to all; for there are some few, undoubtedly, which really approach the standard of village communities elsewhere, being composed in the main of members of one clan, descendants perhaps of a common ancestor. Even in these however, ancestral right, as regulating the relative claims of the shareholders, has completely fallen into abeyance. The villages classed as *zamindári* are probably rightly so classed; they are villages owned by one proprietor or by one family, the shares in the latter case being undivided. In illustration of what has been said, the following remarks of the Settlement Officer of 1857, Captain Graham, may be quoted :—

"In practice each man's holding has become the sole measure of his right. In the event of disproportion arising between any of the holdings and the share of revenue assessed upon them, the estate is liable to redistribution of the revenue, but to no repartition of the lands. There is no community of possession in such lands, which are inherited, transferred, and possessed in severalty. Each estate is made up of independent freeholds, and each freehold made up of fields, which sometimes lie contiguous, but more frequently are found scattered about and intermingled with the fields of other proprietors. These fields are often possessed by men of several different communities, of distinct families and tribes, having no interest, either actual or contingent, in common, and no concern with each other but that of holding fields within the boundary of the same township, residing in a part of the same hamlet, or paying either through a common or separate representative, their portion of the revenue assessed upon the village. Still these men, though maintaining their individuality, belong to village communities, and the latter are not unfrequently composed of the descendants of a common ancestor. In such tenures the grazing land alone is held in common."

Superior and inferior proprietors.

The tenures of the district are inseparably connected with the former revenue administration, an account of which follows under heading *b*. The mutual relations of the classes living on the land have been formed by the revenue system of the Sikhs and British. The system has not adopted itself ot the existing state of things, but has distinctly and abruptly interfered with it. At the head of the agricultural system is a large body of what are now called superior proprietors. Most of these are the descendants of tribes who came here for grazing at a time when the country was depopulated. With or without the leave of the Government of the time being, they occupied tracts, the boundaries of which were not very clearly defined. Of this kind are the Thahíms near Muzaffargarh, the Parihárs of Kot Addú, the Khars of the Thal, the Chhajras and Dammars in Alipur, and other tribes still occupying distinct tracts of country. Other superior proprietors are the descendants of *jágírdárs* and former

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governors or officials who lost their position in troubled times, but were able to retain a right to a small grain fee in the tract over which they once exercised power. Others are the descendants of *makhdúms* and other holy men who formely held land free of revenue, but whose rights have been circumscribed by successive governments. The superior proprietors above described were from the first in the habit of introducing settlers to till the lands, but the great development of the settler class was due to Díwán Sáwan Mal. When he took the farm of the revenues of this district from Ranjít Singh, he saw at once that cultivation could not be restored or increased by the representatives of former governors, holy men, broken down *jágírdárs*, and loosely connected tribes whom he found in nominal possession of the lands. He therefore encouraged strangers and Hindú capitalists to sink wells, dig canals and cultivate the lands of nominal owners. At the same time he secured to the latter a share of the produce, generally half a *ser* in each maund by weight, or one *pái* in each *path* where the crops were divided by measure. In some cases the old proprietors were strong enough to levy an institution fee, when a settler was located on their lands. In this way two distinct classess of proprietors were formed :—

(1). The old possessors who were known as *zamíndárs* and *mukaddams*, and in modern official language, *málikán ála* and *taallukdárs*.

(2). The settlers, formerly called *riáya* and *chakdárs*, and now generally *málikán adna*. The *chakdár* was so called from the wooden frame on which the masonry cylinder of a well is built. The name was meant to express that the *chakdár* had acquired his rights in the land by his having sunk the well. For this reason he was also called the *silhdár* or owner of the bricks of the well.

The superior proprietors claim to be owners of all unappropriated land, and entitled to a small share of the crop produced in the appropriated land. The *málikán adna* are full proprietors of the land in possession, subject to the payment of the share of the old proprietors, are not liable to eviction on failure to pay it, and are entitled to introduce tenants without reference to the superior proprietors. Since annexation the fortune of the superior proprietors has varied. In some villages the tenure has disappeared. In others, especially where little unappropriated land was left, the *lambardár*-ship, which was a novelty, took the place of the superior proprietary right. In Sináwán the tenure survives in every village, because a record of the superior proprietary right was made and the grain fee was commuted into

(1) A *pái* is a measure of grain containing about 16 sers by weight. A *path* is a measure equal to about 32 maunds. 64 *páis* make a *path*.

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Land Revenue.

Superior and inferior proprietors.

money at the rate of Re. 1-12-0 per cent. on the land revenue. In Muzaffargarh and Alipur no such arrangement was made, and the tenure has disappeared in the majority of villages. In Muzaffargarh there are 412 villages. In 139 there are both superior and inferior proprietors. In 273, superior proprietorship has disappeared, and the inferior proprietors have become absolute owners. In Alipur there are 207 villages. Superior proprietorship has survived in 48 only. The superior proprietors, as such, have no right to interfere in the management or the cultivation of the appropriated lands of a village. The settlement has in no case been made with them. Except where they are also inferior proprietors, their rights are restricted to receiving their fee in grain or cash, and to disposing of the unappropriated waste in the village. The name of the superior proprietary right is *zamindári, mukaddami* or *milkiyat ála*. The share of the produce is *hak zamindári, hak mukaddami* and *málikána*; or more often the specific rate at which the share is fixed, *e.g.*, *adh-sera man* and *páí path* are used instead of the generic word. In Sináwán it is called *satten pánwen*, or the seven quarters of a rupee, which equal Re. 1-12-0, the rate at which it is paid. The institution fee is called *jhúri sar-o-pá, pag* and *lungi*.

The Multáni Patháns

One set of superior proprietors was formed by the direct action of the British Government. They are the persons known here as the Multáni Patháns. Under the Pathán governors of Multán a number of Patháns had settled in this district. They enjoyed grain allowances which were given as a deduction(1) from the *mahsúl* or government share of the produce. When the Sikhs in 1818 took Multán, the Patháns fled the country. In 1848 they joined Major Edwardes and rendered services in his operations against Múlráj. When the country had become quiet, the Patháns claimed restoration. The rules of limitation were set aside in their favour, and with its letter No. 1975, dated 30th September 1850, the Board of Administration prescribed rules "for the regulation of the trial of suits instituted by the Patháns of Multán for the recovery of their ancestral rights," of which the following is an extract :—

Rule 2.—" To establish the right of a party to use, irrespective of the Statute of Limitation on the merits of his claim to re-possession of *zamíndari* property, he must prove that he was a Multáni Pathán present with Major Edwardes' force, or that he is a member of a family of Multáni Patháns, some of the members of which family were present with Major Edwardes' force."

In pursuance of these rules, cases continued to be heard up to December 1852, and Patháns obtained decrees for *kasúr* in the villages of Jalálábád, Piplí, Rán, Khanghin, Mahra Faráz, Wafádár-

(1) This deduction was called *kasúr*, which, it should be noted, is different from the *kasúr* which is also the name for the particular rent of the inferior proprietors.

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pur, Mahra Nasheb, Ghazanfargarh, Doába, Jarh, Latukrán, Langar Sarái and Lálpur. The measure can only be considered disastrous. It was not observed at the time that under the Pathán governors this *kasúr* was paid as a deduction from the revenue, and that if the Patháns were to be restored under the altered state of things brought about by a cash assessment, the more just method was to have given them an allowance from the revenue, and not to have imposed a new grain-cess on the cultivators. In 1853 the Deputy Commissioner reported that the exercise of the rights of the Patháns who recovered *kasúr* paralyzed the industry of the cultivators, and again, in 1859, he said that the restoration of the Patháns to *kasúr* rights was impolitic. The failure to define those rights had allowed them to encroach on the inferior proprietors and to ruin them. He instanced villages that had been ruined in this manner. The result was that in some villages the Patháns succeeded in ousting altogether the inferior proprietors; in others they reduced them to the position of tenants-at-will. Where the inferior proprietors were too strong to be interfered with, beyond the enforced payment of *kasúr*, the Patháns became superior proprietors.

Inferior proprietors. *Adhlápi, Lichh, Kasúr.*

The way in which the status of inferior proprietor was formed has been described. The inferior proprietors in a village have usually no common ties of clanship. They are a miscellaneous body, each member of which was originally introduced either by the government or by the superior proprietors. In villages where superior proprietary right exists, the inferior proprietor is usually entitled only to the land occupied by himself or his tenants. The unappropriated waste belongs to the superior proprietors. The inferior can graze his cattle in it, subject to the *tirni* rules, but cannot cultivate it without leave of the superior. In other respects the tenure of inferior and absolute proprietors differs only in that as regards the latter, the superior right has ceased to exist. The formation of new superior proprietorship where it has ceased to exist has of course long been impossible, but new inferior and absolute proprietors are constantly being made by the contract known here as *adhlápi* or *adlopi*. A proprietor allows a third person to sink a well in his land on payment of a fee, and to bring the land under cultivation. The person so sinking the well becomes proprietor of half the land brought under cultivation. If an inferior proprietor cultivate through tenants, he receives a grain fee which is called *lichh* on the Indus, and *kasúr* on the Chenáb. The rate varies with locality and in consequence of contract, but it is almost invariably one-seventeenth of the gross produce, and is known as *solh satári*. Under former governments the share taken by the State was the *mahsúl*. Now the person who pays the land revenue receives the *mahsúl*. This person may be by agreement the superior proprietor or the tenant, or even some person unconnected with the land; but, as a rule, the

inferior proprietor pays the land revenue and receives the *mahsúl.* For the purposes of settlement he has been presumed always to pay the land revenue and to receive the *mahsúl,* and his profits have been assumed to be the *mahsúl,* plus the *lichh* or *kasúr.*

The following statement shows the percentage of area cultivated by owners and by tenants of each class in each of the Tahsils as ascertained at the recent settlement :—

CULTIVATED BY	PERCENTAGE OF AREA.			
	Sináwán.	Muzaffargarh.	Alipur.	District.
I.—Owners	42·5	38·1	40·	39·9
II.—Occupancy tenants—				
(a) paying land revenue with or without *malikána*	10·	·8	·6	3·2
(b) paying *batai*	4·	·8	1·2	1·7
Total occupancy tenants ...	14·	1·6	1·8	4·9
III.—Tenants-at-will—				
(a) paying land revenue with or without *malikána*	6·25	3·9	2·8	4·3
(b) paying other cash rents	·25	·9	·3	·5
(c) paying *batai*	37·	55·5	55·1	50·4
Total tenants-at-will	43·5	60·3	58·2	55·2
GRAND TOTAL	100·	100·	100·	100·

The agricultural population of the district consists mostly of peasant proprietors, and quite 40 per cent. of the area is cultivated by landlords themselves. More than half the area is held by tenants-at-will paying rent in kind. These figures include owners who have for one reason or another cultivated the lands of their relatives or co-sharers and pay rent to them. The proportion of occupancy tenants is very small. Cases of tenants paying no rent whatever are rare and are confined to small encroachments upon neighbouring lands. No rent is paid for such encroachments and yet the cultivators have to be recorded as tenants of the real owners of the land.

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Mundhimár tenants. *Butemár* tenants.

Two classes of tenants existed before the 1st Regular Settlement :

(1). Those who had by clearing the jungle and by bringing land under cultivation, acquired a permanent right to cultivate. These are called *mundhímár* or *butemár*, and were, as a rule, recorded at the 1st Regular Settlement as tenants with rights of occupancy.

Charháyat tenants.

(2). Those tenants who had been put in, with or without a term being fixed by proprietors, to cultivate land already cleared and fit for crops. These are called *charháyat*. They were usually recorded as tenants without rights of occupancy.

Charháyat tenants.

Tenants are now classified according to the language of the Tenancy Act of 1887. Land was so abundant at the 1st Regular Settlement that the occupancy status had no attraction for tenants. They preferred not to be tied to the land, and to be able to change their cultivation when they liked. In the Sinánwán *Tahsil*, applications by tenants not to be recorded as having rights of occupancy were common, though they were by custom entitled to permanent possession. Circumstances have changed now, but tenants are still eagerly sought after, and, as a rule, free from any attempt on the part of the landlord to extort from them. Every effort is made to retain them. Some landlords study to get their tenants indebted to them, in order to keep a hold on them. The share of the crop received by the tenants is called *raham*.

Exceptional forms of agricultural status.

In addition to the usual forms of proprietors and tenants with their respective shares in the produce, there are certain exceptional forms of agricultural status, which require to be described.

Mahsúlkhor.

It often occurs that an inferior proprietor, from indolence or inability to keep accounts and manage for himself, agrees with some third person, usually a village shopkeeper, that the latter shall receive the *mahsúl*, pay the Government revenue out of it, and keep the profit or bear the loss. Such a person is called a *mahsúlkhor*. This arrangement was very common before the 1st Regular Settlement, but the class is dying out and only a few solitary instances are to be met with now.

Lichháín.

Lichháín means a cultivator who tills his land with borrowed bullocks, and pays the owner of the bullocks half of the *raham*, or cultivator's share.

Anwáhndá.

Anwáhndá literally means "without working." Hence it means that share of the produce which a person connected with land receives without working or foregoes because he has not done work which by custom was incumbent on him, *e.g.*, A lends B money, and instead of getting interest in cash, receives a share of the produce. That share is called *anwáhndá*, because A gets it without working for it. When a landlord has cleared the jungle and brought land under cultivation himself, and then gives it to a

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tenant to cultivate, he takes an extra share of the produce, because he has himself done the work which the tenant should have done. This share is called *anwáhndá*, because the tenant did not do the work of clearing. The word *anwáhndá* of itself has no meaning without the history of the manner in which it accrued.

Lichh, Khuttí.

Lichh in its ordinary sense means the due of the inferior proprietor, and is synonymous with *kasúr* as already described. But *lichh* also means the interest due on a mortgage of land when the mortgagor continues in cultivating possession, whether it be paid in grain or cash. Another kind of *lichh* is *valwín lichh, i e*, "returned *lichh*," which is also called *khuttí*. When land is mortgaged to a Muhammadan, and the conditions of the mortgage are that the mortgagee shall cultivate the land, he agrees to pay a small share of the produce to the mortgagor. This share is called *valwín lichh* or *khuttí*. The use of *lichh*, to mean interest, and the practice of *valwín lichh*, are devices of Muhammadans to evade the charge of receiving interest, and are now in vogue among Hindús as well.

Lekha mukhí mortgages.

Lekhá mukkhí is the name of a kind of usufructuary mortgage in use. A debtor makes over his land to a creditor until the debt is paid from the produce of the land, or the debtor retains the cultivator and agrees to pay the proprietor's share to the creditor. In both cases the creditor charges the interest of the debt and expenses against the debtor, and credits him with the produce of the land or with the proprietor's share, until the debt is liquidated.

(*b*) Land-revenue under native rule.

The Thal Nawábs' revenue system.

An acount of the various governments that preceded the union of this district under Sáwan Mal has been given in Chapter II. Very little is known of their revenue system. In the Thal Nawáb's country, the revenue on all crops, except cotton and tobacco, was taken in kind. The pay of village servants, including religious dues, was set aside from the gross produce. Of the remainder, the Nawáb took one-fifth or one-sixth. A cess called *tik* was also taken at the following rates:—In the *kharíf* harvest, when the government share was one-fifth, the rate of *tik* was Rs. 4 on each *path*,[1] and when the share was one-sixth, *tik* was Rs 2 per *path*. In the *rabi* harvest when the government share was one-fifth, *tik* was Re. 1 per *path*; when the share was one-sixth, *tik* was Rs. 2 per *path*. It is difficult to understand the difference of the proportion of *tik* to the government share in *kharíf* and *rabi*, but these rates are well established. *Tik* means the stone of a ring, and is said to have been first levied to replace the ring stone lost by some lady-love of a Nawáb, who found the tax so convenient that he never ceased to levy it. It is not clear which of the neighbouring Nawábs first invented this device for raising his revenues. Whichever it was, they all followed suit, and the Nawábs of Baháwalpur and Mooltan also had their *tik*. Cotton and tobacco paid a rate per *bigha*, the amount of which is not known. The amount of *tirni* or grazing tax was fixed for each tract.

(1) *Path* is a measure of grain equal in weight to about 32 maunds.

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Revenue system of the Baháwalpur Nawábs.

The Baháwalpur Nawábs collected their revenue in kind, plus *tik* and a tax on indigo called *moghla*. *Moghla* was in some parts a fixed rate of Rs. 5 per maund. In others it varied according to the market price, *e. g.*, when indigo sold for less than Rs. 40 per maund, the rate of *moghla* was Rs. 3 per maund; when it sold above Rs. 40, *moghla* was Rs. 6. All the Nawábs took *zakát* or transit duties, and must have levied many taxes besides, for Sáwan Mal could not have invented the innumerable cesses we shall find him collecting, and still have the reputation of being such a good ruler.

Sáwan Mal's revenue system.

Much more is known of Sáwan Mal's revenue system than that of the Nawábs. The changes effected in the system of the Nawábs by Sáwan Mal may be briefly stated as follows:—He commuted the government share into cash at a price a little higher than the market price, and made the cultivators take back the government share and pay the price so fixed.

In describing Sáwan Mal's system, one is liable to fall into the error of stating that any single administrative act or procedure applied to the whole district; whereas, from the want of record, the local area to which a particular act or rule extended cannot now be known. For instance, when we read that Sáwan Mal levied half the gross produce, and then, by manipulating the market rate, turned the half into three-quarters, and on that collected a number of cesses, took the usual dues of officials, and paid them only a pittance as salary, and appropriated the customary alms, we get a total which arithmetically comes to more than the gross produce of the land, and leaves no margin of livelihood for the cultivator, who was certainly so well off that 35 years after, he remembers the time of Sáwan Mal with regret. The truth is that Sáwan Mal's assessments were adjusted on a very perfect local knowledge. He began low, and gradually raised the assessment as circumstances justified it. Thus wells in the *Thal* were leased at fixed sums according to their quality, but when the lessee cultivated more than the usual area attached to one well, the fixed sum was set aside, and the whole crop was shared. If the crop was unusually good, the *kárdár* thought that government should share in the prosperity, and at once levied a fee called *nazar mukaddamí*. Again if prices rose much after the rate fixed for commuting the grain into cash, the *kárdár* levied a fee called *shukrána*, or thanks-offering. Thus the Diwán, though he had not thought of the improvement of communications, took advantage of the extension of cultivation, good seasons and the rise of prices, as much as any Settlement Officer of the present day. Again, the Díwán always adhered to the ancient rate of the government share, but where it could be done, he raised the revenue by adding cesses; and at annexation it was found that where the rate of the government share was high, cesses were few; where the rate was low, cesses were many. In modern

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Sáwan Mal's revenue system

language, Sáwan Mal enhanced his revenue by means of cesses. The indiscriminate remission of these cesses, described in former Settlement literature most incorrectly as "arbitrary modes of increasing the revenue by petty and vexatious dues," whereas they really made the burden uniform, was one of the causes why the First Summary Settlement worked so unequally. The difficulty in describing Sáwan Mal's revenue system arises from our present ignorance of the limits affected by any fiscal act. Here and there a fact or two remain, such as that *moghla* was not collected in Sanánwán or *zakát* in Murádábád *Taalluka.* Cesses were numerous in Shahr Sultán where the government share was one-sixth, and few in the neighbouring *Taallukas* of Sítpur and Dháka where the government share was one-fourth; but enough is not known to enable us to say how each part of the district had its burden adjusted to its capacity. With this warning, an attempt may be made to describe the dealings of Sáwan Mal's Government with the people.

Two classes of revenue-payers.

Under Sáwan Mal there were two classes of revenue-payers.

Pattadár.

One class were *pattadárs,* or lessees who paid fixed amounts in cash for the wells cultivated by them. The amount usually varied from Rs. 12 to Rs. 24 a year, plus a *nazarána* of Rs. 2 yearly. This rent was paid $\frac{2}{5}$ths in *kharíf* and $\frac{3}{5}$ths in *rabi.* The area attached to leased wells was from 40 to 50 *bighas.* If a lessee cultivated more land than was entered in his lease, the crop grown in the extra land cultivated was shared at the rates prevailing in the neighbourhood. If from poverty or other reason the lessee failed to cultivate his land, no remission was granted. If the lessee grew the following superior crops, indigo, sugarcane, tobacco, rice or *til, batái* of them was taken and the other crops grown were considered to cover the fixed rent. Lessees of rich wells were compelled to sow one *bigha* of tabacco in *rabi* and ten *bighas* of *til.* In the rich *taalukas* of Muzaffargarh, Khángarh and Murádábád, if the *kárdár* knew the crop to be unusually good, he set aside about 100 maunds of wheat or barley in *rabi,* and 25 maunds of the *kharíf* crop as covered by the fixed rent. He then took *batái* of the remainder of the *rabi* crop, and took *zabtí* rates on the remainder of the *kharíf* crop. Turnips, *jowár* and *moth* were exempt from paying anything to government. In well land, *methra* was also exempt, but in *sailába* lands *methra* paid *zabtí* rates. On a leased well of average quality the following crops were usually grown: In *kharíf,* five *bighas* of cotton and fifteen *bighas* of *jowár* or *moth*; in *rabi,* twenty-five *bighas* of wheat, barley or gram, and five *bighas* of turnips. From the fact that special rules were made for the richer crops and for richer wells, and that in an average well no mention is made of richer crops, it is probable that only isolated wells that were unassisted by canals were leased. The remarkable feature about the leased wells is the amount of interference that was permitted with the nominally fixed rent.

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Baháwalí.

The second kind of revenue-payers were those who paid a share of the crop *batái*, here called *baháwalí*, and *bigha* rates on certain crops. The share of the crop taken by government was called *mahsúl*. It ranged from one-sixth to half of the gross crop. There is no information to show how this share was originally fixed. Sáwan Mal seems to have adopted the share fixed from time immemorial, and to have equalized and increased it by means of cesses. An account of the cesses will be given hereafter. In the parts of this district near Multan city the *mahsúl* was usually taken in kind, because grain was required for the troops and the court. In the rest of the district *mahsúl* was returned to the cultivators, who were obliged to buy it from government at a rate which was usually 25 per cent. above the market price. The following crops paid the *bigha* rates entered opposite each. This mode of paying revenue was called *zabtí* :—

Kharíf crops—	
Rawánh	Re. 1 per *bigha*.
Jowár grown for fodder	Re. 1 „
Chillies	Rs. 4 „
Rabí crops—	
Methra	As. 10 to As. 12 per *bigha*.
Peas	Re. 1 per *bigha*.
Green wheat used as fodder ...	Re. 1 „
Tobacco	Rs. 4 to Rs. 5-0 per *bigha*.
Saffron	Rs. 4 per *bigha*.

Cesses.

As already stated, cesses were extremely numerous, and were used as a means of equalizing the *mahsúl*, and of enhancing the revenue where opportunity offered. The cesses levied by Sáwan Mal have more than an antiquarian interest, because they are the form in which powerful proprietors now attempt to extort from tenants a rent higher than that fixed by custom or agreement. These cesses were taken either by government or by officials, and in no way formed part of the proprietor's dues. Fines for criminal offences were always levied at harvests, and it is often difficult to distinguish between a cess and a fine. The following were the most common cesses. After them the fines are given. They are interesting as showing what offences formed Sáwan Mal's Penal Code. The cesses called *nazar mukaddamí* and *shukrána* have been already mentioned. The others were :—

1. *Nazar muharrir*, also called *páo maní*. This was a quarter of a ser per maund on all crops, and was levied when the crop was weighed. The cess was of long standing; Sáwan Mal confiscated it and credited it to government.

2. *Farúí karáwa* (*Farúí*, anything extra or beyond the regular receipts, and *karáwa*, a field watchman) consisted of fines on cattle trespassing, levied by the watchmen engaged to watch the crop while ripening.

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Cesses.

3. *Nazarána* paid to officials, *e.g.*, presents made to *muharrirs* on beginning the division of a field; a horse or a camel from holders of revenue-free wells, or wells held on favourable terms, a small *nazar* on *muáfi* wells, in order that there might be some record of them in the accounts. *Nazars* were taken on various pretexts, generally for the nominal pay of government servants, but really to increase the revenue. *Nazars* were strictly credited to government, but embezzlements took place.
4. *Dumbírí*, the pay of the persons who weighed the crop. This ranged from $\frac{1}{4}$ to 1 ser per maund. Besides, they took whatever the cultivators would give them (*jholí*). Government took half of this cess, and half went to the weighmen.
5. *Muhassilí* was nominally levied for the pay of the field watchmen during the ripening and harvesting of the crop. Government took half the *muhassilí* and half went to the watchmen.
6. *Bhára*, or carriage hire. The cultivators were bound to convey the government share of produce to the government stores. Sometimes a cess was levied to represent the cost of carriage. It is a favourite practice of proprietors now to charge tenants with carriage.
7. *Fines.*—Agricultural fines were taken at harvest for the following offences: falsely weighing the government share, theft, adultery, killing kine, fighting, embezzling *dharat* or *zakát*, cutting female date trees, *shísham*, *kikkar* and *ber* trees, destroying crops and cutting the harvest without permission, taking bribes. Four times the bribe taken was refunded.

Personal interference; and rights of individuals secured.

Under Sáwan Mal there was a great deal of personal interference with the cultivators, and it was part of the administration to see that the rights of all persons attached to the land were secured. The *kárdárs* managed for the cultivators, made them cultivate, made the Hindús lend them money, and made the borrowers repay. The agriculturists were pitted against one another to cultivate. If one man did not cultivate his land, it was given to another who did. Similarly the rights of each person claiming part of the crop were faithfully paid to him. The menials were paid from the gross produce before the government share was taken. The remainder was divided between government, the *zamíndárs*, the *chakdárs* and the cultivators. The last three classes have been described under "Tenures." Government took the *mahsúl* in cash or kind as already stated. The *zamíndárs* received their *mukaddamí*, *zamíndári* or *málikána* (it was known by all three

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names), at the rate of ½ ser in the maund. The *chakdárs* received their rent which was called *lichh* on the Indus and *kasúr* on the Chenáb, and the cultivator received his *rahkam* or cultivator's due. It is important to note the shares into which the crop was divided under Sáwan Mal, because after annexation the Settlement was made with the *chakdárs*, who accordingly began to take the *mahsúl*, and the aggregate of the *mahsúl* and *lichh* or *kasúr* formed the *chakdár's* profits on which the assessment was based.

Non-agricultural cesses.

The cesses unconnected with agriculture were—

1. *Tirní dúkán*, a yearly fee of Re. 1, paid by all artizans, not by shopkeepers, as the name would seem to mean.
2. *Tirní shutrán*, a poll-tax on camels. The rate varied from Re. 1 to Rs. 2 a year.
3. *Tirní rásán*, a poll-tax on female buffaloes, sheep and goats.

The following were the yearly rates:—

	Rs.	a.	p.
Female buffalo	0	8	0
Sheep and goats	0	1	0

Cows, bullocks, donkeys and horses paid nothing.

The government also claimed from one-third to one-sixth of all fish caught in the rivers, lakes and ponds. The government share was commuted to money, and the fishermen were obliged to buy the government share at the price fixed. Transit duties (*zakát*) and town duties (*chungí* and *dharat*) were levied. Nothing is known of the rates or amount of this kind of revenue.

Revenue from trees, especially dates.

The cutting of *pippal* and *bohr* trees was entirely forbidden out of respect for the scruples of the Hindús. All other trees were absolutely the property of government. If a person wanted a *tahli* tree, he was obliged to obtain a personal interview with Sáwan Mal and make his request. If it was granted, Sáwan Mal issued a written order to assess the value of the tree, and the price was paid before leave to cut the tree was given. Leave could be obtained from the *kárdár* to cut *ber*, *kikkar* or *siris*, locally called *sharinh*, trees on payment of from 8 annas to Re. 1. But the largest revenue was derived from date trees, and the most stringent regulations existed regarding them. Government claimed all date trees wherever grown, and the owners of land could no more cut date than *tahli* trees. Each year in the month of Hárh (June-July), an appraisement of the crop was made and the estimated weight recorded. The crop was then sold at a fixed price to brokers called *baikhars* (from *bai*, selling, and *kharídan*, to buy). The *baikhars* were not the owners of the land in which the trees grew. They were usually persons who had bought the dates for many consecutive years, and were seldom changed. A change was possible if a higher bid was offered, but in practice

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Revenue from trees, especially dates.

was rarely made. After the crop had been appraised, the responsibility of watching it till ripe fell on the *baikhars*, and an allowance was made to cover the expense of watching. The price of the dates was rigorously exacted from the *baikhars*, and a *baikhar* of some standing could with the greatest difficulty get rid of the responsibility of buying the appraised crop at the fixed price. Rain and a fall of prices were most dreaded by the *baikhars*, but no remissions were ever given. Instances are known of their leaving the country and of their attempting to commit suicide, in order to escape the severity with which they were held to their contract. It is said that in early times the landowners used to get one-fourth of the crop, but of late years Sáwan Mal had taken possession of the whole.

Changes of administration on annexation.

The revenue system above described was in full work at annexation. The Multán governor was taking *mahsúl* in cash or kind, plus cesses. He took the whole of the date crop, and was absolute proprietor of all trees. He levied a poll-tax on artizans, camels, female buffaloes, sheep and goats. He also levied transit and town duties. At annexation, all cesses were abolished. The proprietorship of the dates was conferred on the owners of land, and a very low cash assessment made on the female trees. The ownership of other trees was surrendered to the landowners. *Tirní* on artizans and transit and town duties were abolished. The tax on camels, female buffaloes, sheep and goats was maintained. The *mahsúl* was converted into a cash assessment in the following way: "The average payments for three years were converted into money at the market prices, with a reduction of 10, 15 or 20 per cent. according to the state of the country."

The average income of the preceding three years was as follows for two *tahsíls*:—

	Rs.
Muzaffargarh	3,46,287
Alípur	2,22,245

The First Summary Settlement.

We unfortunately have not the income of the Sinánwán *Tahsíl*, which after annexation belonged to the Leiah District. The district was settled and the settlement reported according to the old *Taallukas* of which there were 24 in the district. Captain Hollings, Deputy Commissioner of Leiah, settled the whole of the Sinánwán *Tahsíl*. Mr. Wedderburn, Lieutenant Farrington and Lieutenant James settled the rest of the district. The following was the result:—

	Rs.
Muzaffargarh	2,57,589
Alípur	1,82,737
Sinánwán	1,44,814
Total	5,85,140

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The First Summary Settlement.

This Settlement worked very badly. The indiscriminate remission of leases made it unequal. The cultivators did not know how to manage for themselves. They had been used to rely on the *kárdárs* for arranging all details of agriculture, and this support was suddenly withdrawn. Even the great concession of ownership in the date trees was misunderstood. The people went in crowds to petition the Board of Administration. Their complaints were, that the system was new, that they could not arrange for watching the fruit, and that they did not know how to distribute the assessment among themselves. Then a great fall in prices took place. The Sikh collections were commuted to money at Re. 1-8 a maund for wheat. Immediately after the Settlement prices fell to 10 annas and 12 annas per maund. Dates before annexation sold at Rs. 2-8 per maund. In 1851 the price was Re. 1-12. The district correspondence between 1850 and 1857 reads as if there was continued famine in the district, while at the same time magnificent harvests are reported. During these years revenue defaulters were in jail for three months or more. *Lambardárs* threw down their *pattas* in court and clamoured for reduction. Proposals were made to sell villages for arrears of revenue. Reductions and remissions were largely given. The Deputy Commissioners reported on the general severity of the *jama*, and suggested revision. The number of transfers of land attracted the attention of the Financial Commissioner, who was "convinced that the transfer arose from undue pressure of the government demand." It was during the First Summary Settlement, in the year 1855, that the demarcation of village boundaries was made by Mir Raushan Alí, Superintendent of Settlement. This was followed in 1856 and 1857 by the revenue survey.

The Second Summary Settlement.

The second Summary Settlement began in 1854. Mr. D. Simson, Deputy Commissioner of Leiah, revised the *jama* of the Sinánwán *Tahsil* which then belonged to the Leiah District. He granted a remission of 10½ per cent., and fixed the *jama* at Rs. 1,29,780. In 1857 Captain Graham revised the *jamas* of the Muzaffargarh and Alípur *Tahsils*. He raised the *jama* 6 and 21 per cent. respectively. The action of the Settlement Officer in increasing a *jama* already too high seems to us now incomprehensible, but the reasons for it are to be gathered from the correspondence. The year 1857 was unusually favourable. The rainfall was good. The rivers rose well and seasonably, and there was an abundant supply of water in the canals. The mutiny was going on in Hindustán, and there had been risings in Multan and Gugera. The favourable seasons induced the Settlement Officer(1) to fix his *jamas* too high, and the fear of being thought disloyal induced the land owners to accept *jamas* which at other times they would not have looked at. But even Mr. Simson's *jama* in Sinánwán was felt to be severe. The Deputy Commissioner in

(1) Deputy Commissioner's No. 356, dated 8th July 1859.

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April 1860 reported that that *tahsil* was "really suffering under a "too heavy and badly distributed assessment." In Alipur and Muzaffargarh, the Settlement, as might have been expected, broke down in a year and a half. The Lieutenant-Governor, when sanctioning the revision, wrote that "A perusal of the report has "convinced the Lieutenant-Governor that instead of being in-"creased, the *jama* ought to have been largely reduced."

The Third Summary Settlement.

The Third Summary Settlement was made by Lieutenant Tighe for the whole district. By this time the Sinánwán *Tahsil* had been added to the district. His assessments for each *tahsil* were as follows:—

	Rs.
Muzaffargarh	2,20,592
Alípur	1,41,042
Sinánwán	1,08,660

In Sinánwán a substantial reduction was again made. In Alípur the result of this revision was to put back the *jama* to the amount at which it stood before Captain Graham's revision. In Muzaffargarh a substantial reduction was given on the *jama* of the First Summary Settlement. This revision was followed by the first distribution of the *jama* and preparation of *khewats* that had been made in the district. This work was done by Sohan Lál, Extra Assistant Commissioner, and is known as the *khewat* of 1923 *Sambat*. The Third Summary Settlement would have worked well but for three things. The inundation canals irrigate 210,000 acres of cultivation. The best crops depend on them. Our immediate predecessors paid the closest attention to the canal arrangements. From annexation to 1876 the clearance and repairs of the canals were wholly neglected. The result was that the cultivators were impoverished and the revenue suffered. In round numbers 120,000 acres of cultivation are dependent on *sailáb*. Enhancements were largely made on account of river action, but remissions were sparingly given for deterioration from the same cause. In short, the revenue administration in the canal and in the *sailáb* country, which form nine-tenths of the cultivation of the district, was about as bad as it could be. This management has been now corrected permanently, and only requires to be noticed here. Illegal and unreported methods of coercion were generally practised and the result was to make the people as bad revenue-payers, as the *Tahsíldárs* bad collectors. The working of the Third Summary Settlement showed that the district was one that required more active revenue administration than most, and that neglect would produce very disastrous results. A local disaster was the series of destructive floods that occurred from 1871 to 1874 in the Sinánwán *Tahsil*.

The First Regular Settlement.

Mr. O'Brien made the First Regular Settlement of the district from 1873—80. All the lands were measured up and an accurate field map was prepared for every village. The revised assessments

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The First Regular Settlement.

were introduced from *kharif* 1878 in Sínánwán and *kharif* 1879 in the other two *tahsils*. The term of the Settlement sanctioned by Government was 20 years. Instead of dealing with the lands by *taalukas* or blocks of villages into which the *tahsils* had been divided in Diwan Sáwan Mal's time, and which had been adhered to in the Summary Settlements, Mr. O'Brien divided the *tahsils* into the following assessment circles, with reference to the sources of irrigation, the system of agriculture and other circumstances :—

Tahsil.	Assessment Circle.					
Sínánwán	Bet ..	Pakka Cháhi Nahri.	Thal Cháhi Nahri.	Thal Chahi	...	...
Muzaffargarh	Bet Sindh	Cháhi Nahri	Do.	In Cháhi	Cháhi Sailáb.	Bet Chenáb
Alípur	Do.	Do.	...	...	Do.	Do.

The riverain tracts including the Bet Sindh and Bet Chenáb Circles together with the Cháhi Sailáb Circles were placed under a fluctuating system of assessment, whereby the cultivated area was measured annually and assessed to a rate per acre fixed for each village. All *sailáb* and *cháhi sailáb* in each circle was assessed at the same rate, a lump assessment being imposed on all wells at work during the year. In the Sindh riverain circles, the *jhallárs* were also assessed similarly to a lump sum ; but in the Chenáb and Cháhi Sailáb Circles a separate rate was fixed for *jhallári* lands. The assessment of certain villages in the Sindh riverain and Cháhi Sailáb Circles was wholly or partly fixed, while in the Chenáb Circles from the extreme north-east of the district down to the junction of the Sutlej and Beás with the Chenáb, the tracts containing wells were given a fixed assessment. The assessment of the remaining circles was fixed, the amount of assessment being arrived at by applying the sanctioned rates to the cultivated area. The rates sanctioned for each circle were these :—

The First Regular Settlement.

Sanctioned rates per acre.

Description of soil.	MUZAFFARGARH TAHSIL.						ALIPUR TAHSIL.				SINANWAN TAHSIL.			
	Bet Chenáb.	Bet Indus.	Cháhi Sailáb.	Thal Cháhi.	Thal Chábi Nahri.	Cháhi Nahri.	Bet Chenáb.	Bet Indus.	Cháhi Sailáb.	Cháhi Nahri.	Bet.	Pakka Cháhi Nahri.	Thal Cháhi Nahri.	Thal Cháhi.
	Rs. a. p.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a. p.
Sailába	1 2 6	0 15	0 14	0 12	0 12	0 14	1 1	0 15	0 14	0 14	0 13	0 10	0 8	0 8 0
Cháhi Sailába	*1 2 6	†0 15	*0 14	*0 12	...	...	*1 1	†0 15	‡0 14	1 6	*0 13	1 0	...	...
Chábi Nahri	1 12 0	1 12	1 12	1 8	1 8	1 14	1 8	1 10	1 6	1 12	1 6	1 6	1 3	§22 0 0
Paggu	1 4 0	1 4	1 4	1 4	1 4	1 4	...	...	1 2	1 4	1 2	1 2	0 15	0 12 0
Jhallári	1 4 0	1 2	1 4	1 2	1 2	1 2	...	...	...	1 2	1 0	0 14	0 12	...
Cháhi Khális	1 4 0	...	1 4	1 2	1 2	1 4	1 2	...	...	1 2	...	1 0	0 15	§12 8 0

* Plus Rs. 9 per well at work.
† „ „ 6 „ „ and jhallár at work.
‡ „ „ 8 „ „ at work.
§ Per well.

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In tracts subject to fixed assessment provision was made for the levy of a water-advantage rate of annas 6 per acre in Sinánwán and annas 8 per acre in the other two *tahsíls* on canal irrigation extended to wells and *pattis* not assessed at Settlement as canal irrigated. This assessment was to fluctuate with the area cultivated from year to year with the aid of canal water. At the same time the following rules were framed for the remission of revenue of tracts under fixed assessment in cases of complete failure or successive partial failures of a canal :—

RULES.

"I.—No remissions should ordinarily be allowed either for total or partial failure of canal water when the total assessment (fixed and remissible) of the well or *patti* is much below rates, for it will be considered that the assessment of the holding shows that allowance for such failures has been made in the assessment. The only exception to this rule will be when a severe failure, resulting in large diminution of cultivation or great loss of crops, occurs for several consecutive years. The Deputy Commissioner may then grant some remission if he thinks the assessment, though much below rates, has become temporarily oppressive owing to the continuous failure. But if the assessment is not merely much below rates, but is exceedingly light and trifling in amount, then no remission should be allowed under any circumstances.

Explanation.—The total assessment of a holding will be held to be below rates if the sanctioned revenue rates of the circle (canal and well or canal alone as the case may be) when applied to the average annual cultivated area as ascertained by the Settlement measurements and subsequent *girdáwarís* give a product above such total assessment.

II.—No remission should be allowed if it appears that the applicant has intentionally failed to take water and to cultivate the well or *patti* in question for the purpose of increasing the cultivation of other wells or *pattis* in which he is interested.

III.—As it is difficult to distinguish irrigation or moistening by river or rain drainage floods from irrigation by canal water all such moistening which has benefited a well or *patti* will be counted as canal irrigation in dealing with claims to remission.

IV.—When the total assessment of a well or *patti* is up to, or but little below, the canal and well, or canal alone, revenue rates of the circle, the following rules will apply :—

(1). If no canal water is received during the season, or if the crops sown are entirely spoilt by the canal ceasing to flow, a remission should be granted provided, of course, that rules II and III do not apply.

(2). If, however, the failure is only partial, that is, if some canal water is received during the season and some crops are grown with its aid, no remission should be allowed merely because the supply has been below the average, for the revenue rates were so pitched as to allow for a considerable degree of fluctuation in the amount of canal water received.

(3). Some remission should, however, be allowed if the partial failure is both severe and continuous, that is, if in two or more consecutive years the supply of water is so scanty and inopportune

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as to cause much injury either by diminishing the area of cultivation or by preventing the cultivation of the usual proportion of the superior crops or by causing part of the crops sown to dry up."

The First Regular Settlement.

The administration of the canals which had been unsatisfactory for a long time was in 1880 placed in the hands of an Executive Engineer. The *chher* rules were revised, a very important change made being the assessment of *chher* (statute labour for canal clearance) with reference to the irrigation of the year, instead of its being made proportional to land revenue. The Government rakhs which had only been marked on maps were now demarcated on the ground and a record of rights was prepared for each rakh securing the rights of Government therein. It was arranged to lease the grazing in the Government rakhs separately and the grazing land attached to villages was assessed to fixed revenue. The *jama* on dates was raised from Rs. 11,503 to Rs. 19,226. The enhancement of revenue of all kinds made at the First Regular Settlement is shown below :—

	Old revenue	Revenue announced by Mr. O'Brien.
	Rs.	Rs.
Land revenue	5,04,970	5,24,468
Grazing	34,623	33,888
Dates	11,503	19,226
Total	5,51,096	5,77,082

Working of the First Regular Settlement.

Mr. O'Brien's fixed assessments worked well except in the Thal Circle of Sinánwán and in a few villages in the Muzaffargarh *Tahsil*. In the Thal, the assessment was heavy and rigid and provided for no elasticity to meet the difficulties of years of drought. Suspensions had consequently to be granted in successive years particularly out of the grazing assessment of the Sinánwán Thal. Three villages, one in the Bet Sindh and two in the Cháhi Nahri Circle of the Muzaffargarh *Tahsíl* adjoining the riverain villages had been placed under fixed assessment. Being somewhat heavily assessed and being situated at the tail of a canal, they could not stand the strain of successive bad years. The landowners got impoverished and the assessment broke down. Remissions amounting to Rs. 112 had to be granted in these villages in 1883-84, and in 1885-86 they were at the request of the landlords placed under fluctuating assessment and assessed at the rates fixed for the adjoining riverain villages, the revenue demand being thus considerably reduced. Otherwise suspensions or remissions had seldom to be granted, except in the Sinánwán Thal. The only year in which large remissions were necessitated in Muzaffargarh was the year 1893-94, when floods from the Chenáb broke into the district and

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caused much destruction of crops and house property. The amount remitted in this year was Rs. 12,934. This was, however, due to an unforeseen calamity and had nothing to do with the working of the Settlement.

Working of the First Regular Settlement.

Under the provision for imposition of water-advantage rate of 6 annas per acre in Sinánwán and 8 annas per acre elsewhere on extended canal irrigation, the average assessment for the five years preceding the Revised Settlement amounted to Rs. 6,904, thus:—

		Rs.
Sinánwán	1896-97 to 1900-01	2,607
Muzaffargarh	1897-98 to 1901-02	2,446
Alipur ...	1897-98 to 1901-02	1,851
	Total ...	6,904

The income in the Alípur *Tahsíl* was less than in the other two *tahsíls*, because much of the canal extension in that *tahsíl* took place in the Cháhi Sailáb Circle, where the lands being subject to a fluctuating assessment were not liable to pay any water-advantage revenue. The increase of revenue was by no means proportionate to the extension of canal irrigation. But it has to be remembered that under the terms sanctioned at Mr. O'Brien's Settlement, this assessment was to be imposed only on lands belonging to wells and *pattis* not previously assessed as canal-irrigated and that all extension of canal irrigation in villages assessed wholly as canal-irrigated, or in wells and *pattis* which were treated as partly canal-irrigated had to remain exempt from any additional assessment. Moreover no adequate means had been devised for the proper supervision of the working of this rule by the *patwárís*. The rules for the remission of canal revenue, owing obviously to their complicated nature, remained a dead letter. Although it is seldom that a canal fails totally in this district, yet it seems difficult to believe that during the 22 years following the First Regular Settlement there was not one single case in which the rules have been applied.

The placing of the riverian tracts under a fluctuating assessment was the most successful feature of Mr. O'Brien's Settlement. The new system gave relief where it was needed, and the assessment of new lands cultivated with the help of *sailáb* was not considered a hardship at all. Under Mr. O'Brien's system a field which failed entirely to mature a crop in either harvest was exempted from assessment, but no remission was made for partial failure of crops. This was felt as a hardship. It sometimes happened that in a field of 40 acres there were only 2 or 3 acres of matured crops, the rest of the crops having failed completely; yet the whole field was assessed at the fixed rate. The fluctuating revenue

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Working of the First Regular Settlement.

of the district, as would be expected, showed considerable improvement. The figures are:—

	Rs.
First Regular Settlement	1,68,253
Average of five years preceding Second Settlement	1,92,510

Some of this increase was due to extension of canal irrigation to tracts placed by Mr. O'Brien under fluctuating assessment.

Notwithstanding the improvements made in it, the *chher* system became a regular grievance and has had eventually to be abolished, as will be noticed further on.

The Second Regular Settlement: revision of records.

The Second Regular Settlement was effected by Pandit Hari Kishan, Kaul, from October 1897 to May 1903. The following extracts from his Final Report of the Settlement describe the steps taken for revision of records:—

Field measurements.

" Along with the re-assessment of the district, a special revision of the records of rights was undertaken under Punjab Government Notification No. 1579-S., dated 27th September 1897. With the exception of the Sinánwán Thal, the whole of the district was completely remeasured on the square system. For the Sinánwán Thal, two sets of maps were prepared at last Settlement, a *thakbast* map for the village showing the boundaries and the positions of wells and the cultivation attached thereto on a scale of 240 *karams* to an inch, and a map on the larger scale of 60 *karams* to an inch for each well. On comparing the *thakbast* maps with the maps prepared by the Revenue Survey Department, it was found that there was no material difference and it was decided to accept the former as correct. Village maps were, therefore, traced from the old *thakbast* (scale 240 *karams*=one inch) and the positions of wells indicated therein. Separate maps of cultivated patches attached to each well were prepared on the usual scale of 40 *karams* to an inch on a modification of the square system. The measurements were commenced in November 1897 and finished in February 1899 in *Tahsil* Sinánwán, December 1899 in *Tahsil* Alípur, and January 1901 in *Tahsil* Muzaffargarh. The field work had to be pushed on vigorously for several reasons. The villages on the Chenáb had to be measured up in the cold weather of 1897-98 in order to compare the boundaries with the Multan District, where the work was a good deal ahead of us. In the riverain tracts generally and in such parts of the district as are liable to be affected by *soma* (water logging) measurements could only be carried on during the winter months as the floods in one case and the appearance of *soma* in the other made the working of survey parties impracticable during the summer. The cultivation in the Thal had also to be measured rapidly by special arrangement as most of the wells are inhabited only in the winter and even then the population being very sparse and the number of men available for assisting measuring parties being limited, it was not advisable to let the *patwáris* take their own time. All these ends could be attained only by pushing on the measurements as quickly as possible, and for this purpose it was found necessary to let the *patwáris* complete the map, the *khatauni*, the field book, the *naksha cháhát* at the spot and leave the rest of the *takmíl* (completion of papers) to be done afterwards. Some of this work was done during the summer months by *patwárís* who could not go on with measurements, and the rest was attended to at head-quarters after the completion of measurements. Advantage was taken of this opportunity of having the calculations and other paper work checked thoroughly, and the

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Field measurements.

misl paimáyash (measurement file) was completed as soon after the completion of measurements in the whole *Tahsil* as possible. The final attestation of the *khatauni* was then undertaken by the Settlement Naib-Tahsildars and all mutations sanctioned up to date were given effect to in the *khatauni*. The Tahsildars and Settlement Tahsildars checked 20 per cent. of the attestation in every village and went over the whole work if they were not satisfied with its correctness in any particular village. The measurements have been made by means of a chain of 10 *karams*, each *karam* measuring 5½ feet. The measurements of last Settlement were also based on the same unit, the only difference being that the chain then used was 12 *karams* long. The measures of area used in the records are :—

1 karm = 5½ feet.
1 marla = 3 *karams* square (*i. e.*, 272 square feet).
1 kanál = 20 *marlas*.
1 acre = 8 *kanáls*.

A measure called *bigha*=4 *kanáls* was also used at last Settlement and this is no doubt the popular measure by which the peasants make their calculations. It was, however, considered unnecessary to enter it in the new records as the acre is understood sufficiently by the people as equal to 2 *bighás* and is recognised as a measure of area.

Result of measurements

The total number of villages at last Settlement excluding Government rakhs (forests) was 727. Of these 42 were transferred to the adjoining districts of Dera Gházi Khan and Multan by the action of the rivers from time to time, and 8 villages came over in the same manner. In fixing the boundaries of villages, 9 were joined on to others and 12 new villages were created. There are 73 Government rakhs which have been measured separately. There are thus 769 villages altogether (including Government rakhs) in the district. The total area of the district by present measurements is 2,019,887 acres. The total area of the villages now included in the district was recorded at last Settlement to be 2,007,011[1] acres, which means an increase of about 13,000 acres or half per cent. This is due partly to the addition to some riverain villages of alluvial lands which were under the river at last Settlement and so remained unmeasured at that time, and partly to the more accurate system on which measurements are now conducted. The total area of each village as now ascertained has been compared with the total areas recorded at last Settlement and at the Revenue Survey. Every case in which the difference exceeded 2 per cent. was carefully looked into. The largest differences occurred in riverain villages or in villages which were split up into separate estates since the Revenue Survey.

The total number of fields entered in the returns of the year preceding remeasurement was 929,417 and the number by the present measurements amounts to 910,260. The number of fields should ordinarily have risen on account of increase of cultivation. The following causes have, however, led to a more or less opposite result. A large reduction in the field numbers was effected by measuring together the habitations and unculturable pieces of land attached to wells which had formerly been measured in small bits, and by treating as one field a whole water-course or a canal throughout the boundaries of a well, while at last Settlement these were cut up into several numbers corresponding to the fields through which they passed. The canals now belong to Government and there was no object in cutting them up into bits. The water-courses are generally joint property within the limits of each well or *patti* and no useful

(1) According to Statement B.

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purpose could be served by treating each of them as divided into as many parts as the fields through which it passed. Again in riverain lands subject to floods, where the boundaries of fields get effaced almost every year, the fields were made large and co-terminus with the proprietary boundaries. The internal divisions get altered every year anyhow, and instead of trying to relay the internal boundaries shown at Settlement, it is better that the *patwári* should measure up the field every year according to the internal divisions that then exist.

The standing record of rights.

The standing record of rights which has now been prepared contains the following papers:—

(1). Robkár Ibtidái (Preliminary proceedings).

(2). Shajra Nasab (genealogical tree).

(3). Jamabandi Arázi (Land Jamabandi).

(4). Jamabandi Nakhlistán (Date Jamabandi).

(5). Jamabandi Bághát (Garden Jamabandi).

(6). Fehrist Muafiat wa Pension (List of revenue assignments and pensions).

(7). Naksha Haqúq Cháhát (Statement of rights in wells).

(8). Naksha Kassiát Zamíndárán wa Raqba Abpásh Nahri (Statement showing *zamíndári* water-courses and the area irrigated from them).

(9). Order of Collector determining the assessment.

(10). Order of Collector distributing the assessment over holdings.

(11). List of holdings not assessed as nahri.

(12). Wájib-ul-arz (Statement of customs or the administration paper).

(13). Mutation sheets.

(14). Field maps (*shajra kishtwár*), (with index map).

The field maps have been stored separately in tin boxes specially made for the purpose. In small villages the genealogical tree and the mutation sheets have been bound together with the other records, but in case of large villages where the bulk of all the papers was too large to be bound up in one volume, the mutation sheets have been bound up separately and the genealogical tree kept in a separate covering. The Chittha Wájib-ul-arz (rough copy of the administration paper) has in the Sináwán *Tahsil* been bound up with the mutation sheets, but in the other two *tahsils* it has been kept separate as it will have to be destroyed, under the rules after six years. The *misl paimáyash* (measurement file), consisting of the *khatauni* and the connected statements, has been separately filed. The field books have been made over to the *patwárís.*

The genealogical tree.

The genealogical tree prepared at last Settlement was attested at remeasurement and brought up-to-date. The document now filed with the Record of Rights is a copy of the old genealogical tree with additions down to the time of remeasurement. Unlike districts in the Central Punjab, the order of holdings in the *jamabandi* does not in this district follow that of the *shajra nasb* (genealogical tree). The *jamabandi* is written up by wells, and it is only inside each well that holdings can be arranged in the order of the genealogical tree. This was the use made of the paper at the time of preparing the measurement *khataunis* and the Standing Record of Rights *jamabandi.*

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The land *jamabandi.*

A detailed *jamabandi* was prepared for the whole district in the summer of 1897, just before the commencement of Settlement operations, and this formed the basis of the revision of records. In the Sinánwán *Tahsil* a *jamabandi* was prepared directly after the completion of the measurement papers (in 1898-99), and this has formed part of the Standing Records of Rights. But a very large number of mutations had occurred during the progress of settlement operations, and it was considered necessary to prepare a detailed *jamabandi* in 1899-1900 incorporating all mutations, which had been attested by the end of August 1900. While, therefore, the *jamabandi* prepared from the measurement *khataunís* and included in the Record of Rights is correct in itself and represents the state of ownership and possession ascertained at the time of measurement, the *jamabandi* of 1899-1900 is the more up-to-date record and for all practical purposes better than the Record of Rights *jamabandi.* The new *jama* has been entered in this *jamabandi* as well as the previous *jamabandi* included in the Record of Rights, and this *jamabandi* of 1899-1900 will be preserved with the Record of Rights under the orders of the Financial Commissioner. In the Muzaffargarh *Tahsil,* the preparation of a *jamabandi* corresponding to the measurement *khataunís* was attempted in 1899-1900, but the number of villages in this *tahsil* being very large, and considerable time having lapsed since the preparation of the *khatauni* in several villages, it was decided that to prepare a *jamabandi* giving effect to all mutations sanctioned since the attestation of the *khatauni* would mean much saving of time. A *jamabandi* was, therefore, prepared in 1900-01 with the entries brought completely up-to-date. The same course was adopted in the Alipur *Tahsil* and the *jamabandi* of 1900-01 in these two *tahsils* has been included in the Record of Rights. Some idea of the mutation work done during the course of the settlement will be formed from the following figures :—

Year.	*Number of mutations attested.*
1897-98	19,339
1898-99	26,907
1899-1900	21,138
1900-01	35,969
1901-02	10,454

The date *jamabandi.*

Besides the land *jamabandi* we had to prepare a date *jamabandi* for the purpose of recovery of the date revenue. A similar date *jamabandi* was prepared at last Settlement, but in preparing the detailed *jamabandís* thereafter the entries in the date *jamabandi* were not brought up-to-date. The work of attesting the holdings of this *jamabandi,* therefore, entailed much labour and necessitated the decision of numerous mutations. The *jamabandi* now prepared gives the names of the persons owning the land on which the trees stand, the names of the persons to whom the trees belong, the persons enjoying the fruit thereof, the number of trees assessed and the revenue assessed thereon.

The garden *jamabandi.*

The assessment of gardens and mango trees separately to revenue necessitated the preparation of a garden *jamabandi* showing the names of owners of the gardens or mango trees who are responsible for payment of the assessment. The *jamabandi* has been prepared in the same manner as the date *jamabandi,* with the difference that, while the entries in the latter were attested by Naib-Tahsildars and Tahsildars, those in the latter were attested by the Extra Assistant Settlement Officer, this being the first *jamabandi* of the kind.

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Statement showing zamindári water-courses and the area irrigated by them.

As part of the statement of rights in wells has been prepared a statement showing the water-courses belonging to *zamíndárs*, and the area irrigated by each. This statement has been prepared for the guidance of the Canal Officers in regulating the distribution of canal water, and has been made part of the Standing Record of Rights. It is, however, a mere statement of the conditions of canal irrigation existing during the period of this settlement and does not establish any rights of the irrigators to any specified quantity of water or to irrigate any specified area.

No record of rights in canal irrigation prepared.

An elaborate Record of Rights of irrigation in each canal was prepared at last settlement showing, besides the history of the construction of the canal, the villages irrigated from the canal with detail of lift and flow irrigation received by each well and *patti*, the branches of the canal with details of irrigation from each, the rights of irrigators to put up *chhaps* (temporary dams) across the canals, the *jhallárs* erected on the canals and the arrangement for clearance of the canals by means of statute labour. The circumstances of the inundation canals in this district are similar to those of the Multán District and while the canals were originally constructed by the *zamíndárs* under the guidance of the rulers and were cleared and maintained by them, the control and management of the canals have since 1880, when they were made over to the Irrigation Department, been passing gradually out of the hands of the irrigators and the last semblance of a voice in the management of the canals which the irrigators had in the form of committee of *sarpanches* (representatives) in the matter of estimating the requirements of clearance of each canal and the fixing of the number of *chheras* (labourers) required every year for clearance work has passed off with the abolition of the *chher* system and the introduction of occupier's rates in lieu thereof. It is, therefore, on the one hand, not wise to tie down the hands of the Irrigation Department by any declaration of rights in irrigation; and the irrigators have, on the other hand, gradually lost the so-called right which they were supposed to possess at last settlement. The question whether a Record of Rights in irrigation similar to that compiled at last settlement should now be prepared, was taken up and for reasons given by Mr. Maclagan at length in paragraph 50 of his final Settlement Report of the Multán District, it was decided that it was unnecessary to do so. It was, however, essential to safeguard the interests of villages which have been assessed to a fixed revenue with reference to their present facilities of irrigation; and it is with a view to give the Irrigation Department an idea of the irrigation of each village on which its present assessment has been based, that the statement of area irrigated by water-courses referred to in the preceding paragraph has been prepared and attached to the Standing Record of Rights. The statement, coupled with the information regarding the area irrigated by each branch canal which it has been arranged to supply to the Department from year to year should be of great help to them in regulating the distribution of canal water in the district.

List of holdings not assessed as *nahri*.

Lists of holdings not assessed as *nahri* have been prepared in tracts under fixed assessment with a view to facilitate the assessment of lands to which canal irrigation is extended. As will be explained hereafter such lands belonging to holdings not now assessed as *nahri* will pay a fluctuating water-advantage rate of 10 annas per acre of matured crops. The lists have been filed with the Standing Record of Rights and will afford a check on the assessment of the water-advantage revenue.

The administration paper.

The administration paper or *Wajib-ul-arz* now prepared contains a statement of the customs prevailing in each village in respect of matters enumerated in Rule 203 of the rules under the Land Revenue Act. It

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is a copy of the old *Wajib-ul-arz* omitting portions which related to subjects that have been expressly provided for by law, and embodying alterations here and there to bring the statement in conformity with actual usage. The arrangements for the collection of income from grazing land and the payment of assessment thereon were settled in making the distribution of assessments, and the provisions have been copied into the *Wajib-ul-arz*. Two other subjects requiring notice are the *malba* (the village expenses) and the menials' dues. The *malba* rate was fixed for each village at last settlement in accordance with Financial Commissioner's Circular No. W-8, dated 18th January 1860, printed as Appendix D to old Revenue Circular 36. The scale adopted was—

	Rs.
5 per cent. in villages with revenue up to	500
4 " " " " " " "	1,000
3 " " " " " " "	2,000
and 2 " " " " " " " over	2,000

The *malba* was collected at these rates by the *lambardár* or *lambardárs*, and no account was usually rendered by them to the landowners of either the surplus or the deficit after defraying the necessary expenses. The principal items of expenditure supposed to be covered by the *malba* are the feeding of travellers and beggars, interring of paupers, cost of processes issued against the village, cost of uniform of *chaukidárs* and repairs to boundary pillars and trijunctions. The last three items, if large, are specially subscribed for. Besides these, some other expenses by way of entertaining visitors are also met from the *malba* which, however, cannot be recognized as lawful. Disputes arose in the beginning regarding the pitch of the *malba* cess, and it was my intention to raise or lower the rate for each village in accordance with its requirements. I however found it very difficult to determine the actual needs of each village, and the *zamíndárs* were generally opposed to a change. With reference to paragraph 93 of Douie's Settlement Manual, I considered it unnecessary to interfere against their wishes and simply maintained the old rates. It was, however, made clear that the rate prescribed in case of each village was the maximum rate, and the *lambardár* was given liberty to incur expenditure within the limit, subject to the audit of the brotherhood at the end of each year. I do not, however, expect that the village community will exercise their right of audit in many cases and the *lambardár* will in all probability always recover the maximum *malba* and undertake to make up the deficit or pocket the surplus, if any. As regards the village menials, the fact of a particular menial being mentioned in the *Wajib-ul-arz* of a village does not make it compulsory for every landlord to entertain him or give the menial the right to recover the dues. The administration papers only contain a statement of what dues each menial receives if employed. In preparing the list of menials for each village, we generally adhered to the list given at last settlement, but it was corrected when it appeared that a certain menial was never employed or that one who was frequently employed had been omitted from the list. The village servant whose name had been omitted in many cases from the administration papers prepared at last settlement, and whose inclusion in the new list was generally objected to, is the *kotwál*. This is a servant who helps the *lambardár* generally in the discharge of his duties, and is supposed to have the grain cleaned and sealed before division. The latter duty he is expected to perform towards every landowner who pays him his dues. In practice, however, he seldom performs this duty, except in case of large landowners, who generally have separate *kotwáls* and the former is the main duty which

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he is responsible for. This village servant is very useful and has become indispensable in most villages owing to the scattered nature of habitations and the fact of the *chaukidárs* not being able to render much assistance to the *lambardárs* in matters other than Police work. In all cases when objections were made, it was found that a *kotwál* was actually employed and the new entry was allowed to stand.

Maps.

The maps prepared at last settlement were on the scale of 60 *karams* to an inch. New maps had to be prepared throughout the district as the old ones had become obsolete, in consequence of extension of cultivation, partition of holdings, alteration of village boundaries, and other similar changes. The old field maps were, however, found to be very accurate and the village boundary maps (*thakbast*) were of great use in settling boundary disputes.

The new field maps have been prepared on the prescribed scale of 40 *karams* to an inch (*i.e.*, 24 inches to a mile), on English mapping sheets containing 16 squares each. The side of a square is 200 *karams* long. The mapping sheets of a village have been tied together and placed in the District Revenue Record-room in tin boxes together with an index map of the village on a smaller scale of 240 *karams* to an inch (*i.e.*, 4 inches= one mile). A second set of maps on country mapping sheets has been prepared for the use of *patwáris*, who have also been supplied with a tracing of the original map on strong cloth for the purpose of crop inspection.

Copies of the maps of villages irrigated from canals were made on tracing cloth supplied by the Canal Department and made over to the Executive Engineer, Canals, for the use of his Department. The Executive Engineer has arranged to print several copies of these maps.

The Forest Department has also been supplied with copies of the field maps of the rakhs on mapping sheets, and, at the request of the Extra Deputy Conservator of Forests in charge of the Multán Division, copies of the index maps of the *rakhs* have also been supplied to him.

The rough index maps (scale 6 inches to one mile) prepared by the *patwáris* on finishing the laying down of squares, showed the positions of trijunctions and were checked with the survey maps. All differences of over 2 per cent. in the distances of trijunctions or marked differences in the shape of the boundaries of villages were carefully enquired into, and the field maps of the villages concerned were not finally passed until I had satisfied myself that there were sufficient reasons for difference from the survey maps. The Revenue Survey having, however, been made as long ago as 1855-56, very considerable alterations had taken place in the boundaries of villages and the position of trijunctions in several cases. In many a case a village was split up since the Revenue Survey into more estates than one. Several riverain villages were not measured and blocks of waste then included in villages were subsequently separated into *rakhs* (forests). In a very considerable number of villages the data available for comparison were not complete. The result of the comparison is given below :—

	No difference.	Less than 1 per cent.	Less than 1½ per cent.	Less than 2 per cent.	Less than 3 per cent.	Less than 4 per cent.	Less than 5 per cent.	More than 5 per cent.	Total.
Number of trijunctions ...	160	573	144	72	73	45	20	82	1,169

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The largest differences are due mostly to alterations in the position of trijunctions of the riverain villages owing to river action.

Maps.

On completion of the field maps, index maps were prepared by reducing the former by scale to (4 inches one mile) showing roads, canals, village sites and other details, but no field boundaries. These index maps were put together and copied on tracing cloth into a collective (*mujmili*) map for each *tahsíl* on the four inches=one mile scale. A copy of each of the *tahsíl mujmili* maps has been submitted to the Surveyor-General of India for the use of the Survey Department, and a fair copy has also been made for use in the district. From the original collective maps of the *tahsíls* were prepared, by pentagraph, maps of each *tahsíl* on the scale of one mile=one inch and two miles=one inch. The small scale maps of the *tahsíls* have been put together and made into a district map. The one mile=one inch map of each *tahsíl* and the two miles=one inch map of the district have been lithographed at the Mufid-i-Am Press, Lahore, and will be kept in the District Office for the use of Revenue Officers and for submission with reports when necessary.

In addition to the above-mentioned maps we have had to prepare collective index maps of the riverain tract lying at the western boundary of the Sinánwán and Muzaffargarh *Tahsíls*, and the whole of the Chenáb riverain on the Baháwalpur frontier, the former in connection with the settlement of boundary disputes and the latter for the purpose of laying down a permanent boundary with the Baháwalpur State. An index map of each village has also been pasted into the *patwáris'* village note-book on a convenient scale, and maps of assessment circles have been placed with the abstract village note-books.

Tribal custom.

A statement of tribal customs was prepared at last settlement in vernacular for each *tahsíl* and appended to the Record of Rights of each village. The customs were re-attested not by *tahsíls*, but by summoning the leading men of each tribe in the whole district together in a meeting. The questions suggested in Sir Lewis Tupper's Customary Law were put to the representatives of each tribe and their answers recorded in vernacular with any examples which could be quoted. The replies of the different tribes have been put together into one volume for the whole district and copies of it have been supplied to the District Judge, the Divisional Judge, and the Chief Court. One copy has been kept in the Revenue Record-room. An English abstract of the customs has also been prepared and published with an introduction as the Code of Customary Law in the district.

Village note-books.

Village note-books were started for the first time in 1885, and a book was maintained in vernacular for each village by the *patwári* and another copy was kept in the *tahsíl*. The bilingual village note books have now been kept in the *tahsíls*, with entries from 1894-95 in Sinánwán and 1895-96 in the other two *tahsíls*, that is, for seven years preceding the re-assessment. The *patwáris* will keep their village note-books in vernacular and have been given new books, from *Kharif* 1902, which will last for the term of the new settlement. Bilingual note-books for the assessment circles, *tahsíls* and the district have also been opened with entries corresponding to those of the village bilingual note-books.

The *pargana* or abstract village note-books prescribed by revised Revenue Circular No. 63, paragraph 24, have been opened and statistics of the five years preceding re-assessment have been entered therein. My village inspection notes have, under the instructions of the Settlement Commissioner, been inserted in them, for reference by inspecting officers. The figures of area, crops and wells which formed the basis of assessment have been given in red ink as also those of the fixed land revenue assessed on each village."

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The process by which the revised assessments were arrived at, and the amount of the assessment sanctioned at the second Regular Settlement, are shown in the following extracts from the final settlement report of Muzaffargarh :—

The amount of the assessment.

"A general re-assessment of the Muzaffargarh District was sanctioned in Government of India's letter No. $\frac{2159}{2642}$, dated 17th September 1897.

Orders for re-assessment.

Douie's Settlement Manual was published, while the settlement was in progress, and, although part of the work had then been completed, yet the proceedings during the settlement were regulated generally by instructions laid down in that book.

Assessment circles.

The names of assessment circles into which each *tahsil* has been divided for purposes of assessment are noted below, together with the names of the corresponding assessment circles adopted at last settlement :—

Tahsil.	Present assessment circle.	Corresponding assessment circle adopted at last settlement.
Sinánwán	Thal	Thal-Cháhi.
	Thal-Nahri	Thal-Cháhi-Nahri.
	Pakka	Pakka-Cháhi-Nahri.
	Bet (Sindh)	Bet.
		Thal-Cháhi-Nahri.
Muzaffargarh ...	Thal	In-Cháhi.
	Pakka	Cháhi-Nahri.
	Chenáb	Cháhi-Sailáb.
		Bet-Chenáb.
Alipur	Sindh	Bet-Indus.
	Chenáb	Bet-Chenáb.
	Sindh	Bet-Indus.
	Pakka	Cháhi-Nahri.
	Cháhi-Sailáb	Cháhi-Sailáb.

In the Sinánwán and Alipur *Tahsils*, the assessment circles fixed at last settlement have been maintained with slight alterations in boundaries and a little abbreviation in the nomenclature. In the Muzaffargarh *Tahsíl*, however, the In-Cháhi and Cháhi-Sailáb Circles have been dispensed with. The villages included at last settlement in the former circle have now been grouped with those of the Thal, Chenáb and Pakka Circles, while the old Cháhi-Sailáb Circle has been absorbed into the Chenáb, Sindh and Pakka Circles. The present conditions of the villages then included in either of the abolished circles are in no way different to those of villages of the assessment circles to which they have now been attached respectively. As the river Indus flows along the whole western boundary of the district, each of the three *tahsíls* has a Sindh Circle comprising the riverain tract flooded annually by the Indus. The Muzaffargarh and Alipur *Tahsíls* being bounded by the Chenáb on the east have each a Chenáb (riverain) Circle, and the Pakka or canal-irrigated central tract is common to all the three *tahsíls*. The Cháhi-Sailáb Circle depending on well irrigation helped by a spill from the rivers is peculiar to Alípur, while the Thal Circle of Sinánwán, where patches of cultivation in the sandy desert depend solely on wells, has no parallel in the other two *tahsíls*. The Thal of Muzaffargarh is similar to the Thal-Nahri of Sinánwán, being mostly irrigated by canals and partly by wells. Taking the whole district together, there are the following assessment circles :—Chenáb, Sindh, Pakka, Thal-Nahri, Thal and Cháhi-Sailáb.

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Classes of soil.

The calssification of soils for purposes of assessment and for the preparation of Revenue records has been based entirely on sources of irrigation, neglecting the natural differences in the quality, composition and fertility of the land. In a comparatively rainless tract like this, so much depends upon the water-supply, that it was not possible to give primary importance to the constituents of soils. A similar classification was found necessary at last settlement and, although the Settlement Record then prepared took note of the natural distinctions of soils, yet that classification was not kept up in the Revenue records prepared since. For the purpose of assessment, only six classes have now been adopted, *viz*, *cháhi*, *cháhi-nahri*, *nahri*, *sailáb*, *cháhi-sailáb* and *ábi*; as these were practically the classes under which crops had been registered since last settlement; but in consequence of the substitution of an occupier's rate on canal irrigation for the system of canal clearances by *chher* (statute labour), it was found necessary to go into greater detail and to note in the Revenue papers every class of cultivation depending upon canal irrigation with or without irrigation from other sources and to distinguish between lift and flow irrigation in each case, as the former is to be charged at half the rates sanctioned for the latter. The following classes of soils have been sanctioned by the Financial Commissioner for adoption in the preparation of revenue records :—

(1)	Cháhi	Land irrigated by well only.
(2)	Nahri	Do. from canal by flow.
(3)	Jhallári	Do. do. by lift.
(4)	Cháhi-nahri ...	Nahri land also irrigated by well.
(5)	Cháhi jhallári ...	Jhallári land also irrigated by well.
(6)	Sailáb	Land receiving moisture from the river.
(7)	Cháhi-sailáb ...	Sailáb land irrigated by wells.
(8)	Abi	Land irrigated by lift from a pond or creek.
(9)	Nahri-ábi	Abi land receiving canal irrigation by flow.
(10)	Jhallári-ábi ...	Do. do. do. by lift.
(11)	Báráni	Land dependent solely on rain.

(*Vide* Senior Secretary to Financial Commissioner's letters No. 3836, dated 19th July 1902, and No. 4105, dated 3rd July 1903.)

Muzaffargarh being one of the seven districts in which no permanent distinctions of soil were noted (Director of Land Records and Agriculture's Circular letter No. 9, dated 6th July 1897), the classification available in the Revenue records of years preceding this settlement was only temporary and related to the conditions existing in the two harvests of each year. As at last settlement so now, the permanent classification of soils and the soil rates have been utterly neglected in framing the assessments which have been based entirely on the cropped area and crop rates. Moreover, the nature of irrigation in the district from canals and from wells which are used mostly to supplement canal irrigation or *sailáb* is on the whole so variable that a permanent classification of soils with reference to sources of irrigation does not signify much. The classification of soils sanctioned by the Financial Commissioner will, therefore, be observed with reference to the crops irrigated in the harvests of each year.

Area on which assessments have been based.

It was not safe to base the assessments on the cultivated area recorded in any one year during the re-measurements and the cultivated area recorded in the papers from year to year before the commencement of this settlement neither showed the full extent of lands capable of cultivation nor represented the area on which the cultivators had grown successful crops; for under rule (iii) printed in paragraph 37 of old Revenue Circular 28 all area not bearing crops was to be returned as uncultivated in this district, while on the other hand, the area on which crops had failed was

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Area on which assessments have been based.

included in cultivation. An average of the figures of cultivated area for several years would also, therefore, not be of much use. It was considered best to calculate the assessments on the area of matured crops in order to proportion the land revenue as far as possible to the actual profits of the landlord. The area under matured crops again varies so largely from year to year, that it would not be fair to base the calculations on the figures of any one year. The average of a number of years was, therefore, taken as the basis for calculating the assets of the landlord and the assessment. For reasons given in the Assessment Reports, the following periods were taken as representing an average cycle of years in each *tahsíl* :—

Sinánwán 1894-95 to 1898-99.
Muzaffargarh and Alipur 1895-96 to 1899-1900.

The average area of matured crops registered in these years is noted below by *tahsíls* :—

	Acres.
Sinánwán	118,702
Muzaffargarh	188,138
Alipur	150,127
Total District ...	456,967

Khardha and other deductions.

Before proceeding to work out the outturns, it was necessary to see that the allowance for failed crops had been correctly made. The following figures show the average area of crops sown and failed during the five years above referred to :—

Tahsil.	Area sown.	Area of failed crop.	Percentage of the area of failed crop to total area sown.
	Acres.	*Acres.*	*Percentage.*
Sinánwán	122,673	3,971	3·2
Muzaffargarh	201,180	13,042	6·5
Alipur	160,489	10,362	6·5
Total District	484,342	27,375	5·7

It was recognized that the failure of crops had been under-estimated in the years preceding this settlement. Leaving alone the calamities of season, the causes of failure of crops in tracts secure from inundation are principally the appearance of *soma* (*i. e.*, water-logging), the spread of saltpetre, the injury done by date palms and roadside trees, besides the general causes of failure of canals, want of rains, and crop diseases. In the Sinánwán *Tahsíl* no allowance for the inadequate estimate of failed crops was made in arriving at the average cropped area, but in working out the half-assets of the canal-irrigated circle it was shown that the damage done by water-logging and similar causes by way of reducing the outturn of crops might be estimated at Rs. 13,000 per annum there. A small reduction from the total value of produce was made on account of damage done to crops by date trees, which have multiplied very largely and have been assessed to revenue. In the other two *tahsíls* it was considered preferable to reduce the cropped area of the Pakka Circles by 5 per cent. in order to counterbalance the under-estimate of *kharába* in the records of past years. No such course appeared necessary in the Thal Circle or in the other circles which were placed under fluctuating assessment. After making the above-mentione

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Kharába and other deduction.

reductions, the following areas of crops were taken as the basis of assessments :—

Tahsil.	Average area sown.	Area of failed crops.	Average area of matured crops.	Percentage of failed area to area sown.
	Acres.	*Acres.*	*Acres.*	*Percentage.*
Sinánwán	122,763	3,971	118,702	3·2
Muzaffargarh	201,180	17,909	183,271	8·9
Alipur	160,489	13,574	146,915	8·5
District ...	484,342	35,454	448,888	7·3

Deduction for fodder.

It is customary in this district to allow the whole of the straw of wheat and other crops to the tenant, for the feed of his bullocks, besides which he is allowed to use up a certain proportion of the fodder crops while they are green. The landlord does sometimes take a camel load or so of straw for the use of his own cattle, but this is only by way of grace, and he cannot claim a share of the straw unless he is prepared to make a proportionate reduction in rent. Carrots and turnips are used entirely as fodder almost everywhere in the district, so is *methra* (fenugreek). Nearly half the *jowar* crop is eaten up as fodder. About 12 per cent. of *moth* and 7 per cent. of peas have been taken as consumed by bullocks. More than half the crops returned as fodder, and some 16 per cent. of crops registered as others, have also been included in the crops intended for the use of bullocks. The rest of the fodder is utilized for the feed of cows, buffaloes, horses, &c., and need not be deducted from the area of crops which go to make up the owner's assets. A small proportion of green wheat is also allowed invariably to the bullocks, but the quantity varies with the amount of work which is done. In purely *cháhi* tracts the proportion allowed is the largest, while on wells assisted by canals or floods it is smaller and on *nahri* and *sailáb* lands the allowance is only nominal. The total area of each crop for the district and the proportion allowed by way of fodder are noted below :—

Crops.	Total area.	Area allowed as fodder.	Percentage.
	Acres.	*Acres.*	*Acres.*
Turnips and carrots	1,908	1,908	100·
Methra	2,612	2,612	100·
Jowár	15,480	7,878	50·9
Fodder	29,774	15,637	52·5
Others	6,531	1,069	16·4
Moth	8,737	1,034	11·8
Peas	26,360	1,783	6·8
Wheat	218,209	5,424	3·5

The total area of crops allowed as fodder amounts to 8·3 per cent. of the average area of matured crops.

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Outturns assumed.

The materials available for judging the outturn of different crops on different soils were—(1) the rates of yield adopted at last settlement and (2) the results of crop experiments performed in the district since the commencement of the settlement, *i.e.*, *Rabi* 1898. The former were somewhat out-of-date and no results of crop experiments performed before the commencement of the settlement being available, the latter, which were too few in number and which extended over very few harvests and covered a very small area on the whole, could not be entirely depended upon. Moreover the results of crop experiments have hitherto been more or less exaggerated in consequence first, of the tendency of local officers to select good crops notwithstanding the instruction that only average crops should be selected for experiments, and, secondly, of the fact that as soon as a field has been reserved for crop experiment, all pilfering and waste become impossible for fear of prosecution. With a view to arrive at a correct estimate of the average outturn of crops, a representative meeting of *zamíndárs* was held in each *tahsíl* and in presence of the Extra Assistant Settlement Officer the Tahsíldár and the Náib Tahsíldárs, the outturns of crops were freely discussed with them with reference to the rates of yields assumed at last settlement, those adopted at the recent settlements of the neighbouring districts of Dera Ghází Khan and Multan and the results of crop experiments made in the district during the course of this settlement. The opinions of the *zamíndárs* were then noted down and later on these figures were tested with the account books of some Hindu landowners out in the district. The outturns assumed in the Assessment Reports were arrived at after all the above deliberation and are given in the following table for the more important crops :—

Outturns assumed.

Crops.	Sailáb.	Cháhi-Sailáb.	Abi.	Nahri.	Cháhi-Nahri.	Cháhi.
	Mds.	*Mds.*	*Mds.*	*Mds.*	*Mds.*	*Mds.*
Wheat	5 to 6½	7 to 9	7 to 9½	6 to 7	8 to 10	6 to 9
Rice	...	...	...	10 to 14	...	...
Cotton	2 to 2½	3 to 3½	3 to 3½	2½ to 3½	3½ to 4½	2 to 3
Sugarcane	...	...	...	10 to 14	12 to 16	...
				Seers		
Indigo	...	...	...	11 to 13	...	...

The outturns are given by soils. They vary from one assessment circle to another and consequently the maximum and minimum rates adopted have been given.

Menials' dues.

Certain dues have to be paid to the menials, who supply additional labour at harvesting times and execute necesssary repairs to well gear, ploughs, &c., all the year round or assist agriculture in other ways. Some of these are paid at the time of reaping the crop and others before the produce is divided between the landlord and tenant. The percentage of the gross produce deducted on this account is noted below :—

Sinánwán	15
Muzaffargarh	14·5
Alipur	11·8
District	13·7

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Menials' dues.

The principal menials are the carpenter, blacksmith, potter, winnower, *laihar* (reaper), *gahera* (thresher), *dubir* (weighman), *kotana* (rope-maker) and *rákha* (watchman). The Mullan and Brahmin have to be paid before all the menials. Some of these men get their dues on all classes of land, others like the potter and rope-maker are entitled to a share of the produce of *cháhí* and *jhallári* land alone. The rates are also different for different circles. The amount allowed to each menial was fixed after careful local enquiry.

Value of produce.

The value of produce was arrived at in the following manner. The gross produce was found out by applying the average rate of yield assumed for each crop to the average matured area ascertained to have borne that crop less the amount allowed for fodder. Deducting the menial's dues, the balance of the produce was converted into cash at the prices sanctioned for adoption by the Financial Commissioner (*vide* paragraph 15). The total of sums thus obtained for all the crops went to make up the value of the divisible produce, which amounted for the whole district to Rs. 44,27,458. This sum was taken as representing the probable value of the divisible produce of the district in an average year.

Landlord's share of the produce.

As has been noticed before 37·5 per cent. of the total cultivated area is *khud-kasht* (*i.e.*, in possession of the landlords themselves), while nearly 58 per cent. of the area is with tenants paying rent in kind. This makes up rather more than 95 per cent. of the cultivated area. The surest standard for judging the profits of the landlord was, therefore, the rent in kind paid by tenants. The rent paid on each holding was ascertained at remeasurement and averages for the villages and assessment circles were arrived at. It was found that the landlord received rent at the average rate of 34·8 per cent. of the divisible produce. In dealing with rent, it has to be borne in mind that there are two classes of proprietors, the superior (*ala*) and the inferior (*adna*) and that, while the inferior proprietors receive the *mahsul* (rent) above alluded to, the superior proprietors receive a percentage either in cash, calculated on land revenue or in kind with reference to the total divisible produce of the land. In some cases the superior and inferior proprietors are the same; in other words, there are no separate overlords. There are thus three classes of superior proprietors :—

(1). Others than inferior proprietors, receiving their due in cash.

(2). Others than inferior proprietors, receiving their due in kind.

(3). Who are also inferior proprietors and receive their due in kind.

It appeared that the fees received by the first two classes were extremely small (*i. e., sattén pawén*, Re. 1-12-0 for every Rs. 100 of revenue, or *pai path* $=\frac{1}{80}$ of the divisible produce) and had evidently been fixed on the understanding that this profit would not be assessable and that the inferior proprietors would take the responsibility of paying the whole revenue. Besides, it would have led to complications, if the insignificant assets of the two first classes were included in rent. It was, therefore, decided to leave those two classes alone, but to include in rent the dues received by the third class of superior proprietors. This addition resulted in raising the percentage of rent to 35·1 of the divisible produce. Applying this rate to the value of the whole of the divisible produce the landlord's share amounted to Rs. 15,55,074. From this sum were deducted Rs. 26,051 in the Muzaffargarh and Alipur *Tahsíls* on account of expenses connected with the repair and maintenance of wells and the clearance of long water-

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courses, which are defrayed by the landlord alone. The net assessable assets of the landlords were, therefore, taken as Rs. 15,29,023, thus :—

NAME OF TAHSIL.	Total value of divisible produce.	Owner's share.	Deduct owner's expenses.	Net assessable assets of landlords.
	Rs.	Rs.	Rs.	Rs.
Sinánwán	10,73,232	3,32,014	...	3,32,014
Muzaffargarh	19,53,816	7,59,241	17,777	7,41,464
Alipur	14,00,410	4,63,819	8,274	4,55,545
Total	44,27,458	15,55,074	26,051	15,29,023

Half-assets and other standards.

According to the above calculation, the half-net assets of the landlords would amount to Rs. 7,64,512. Increasing the value of the total divisible produce (Rs. 44,27,458) proportionately to the allowance made for menials' dues, the gross produce should be valued at Rs. 51,30,311. One-sixth of this would be Rs. 8,55,052. Another standard for judging the revenue which could now be assessed is the sum that would be assessable on the present cultivation at the rates levied at last settlement increased proportionately to the rise in prices. The cultivated area of the present day is not the same as that at last settlement, and while our average cropped area (which is the more reliable figure) is probably somewhat smaller comparatively than the cultivated area recorded at last settlement, the cultivated area of to-day is decidedly a wider term than it was at last settlement and includes a larger figure. These two figures are :—

Average cropped area	448,888	acres.
Cultivated area (1901-02)	509,685	„

Applying the average settlement rate to both the areas and adding 13·8 per cent. on account of rise in prices, we get Rs. $\frac{670,471}{761,279}$.

It has not been found possible to make any useful estimate of surplus produce with reference to the figures of export. The produce of the district is exported (1) by railway to Multan, (2) by boat to Sukkar, and (3) by pack animals to markets across the rivers to the Multan and Dera Ghází Khan Districts and the Baháwalpur State. The figures available are only those of export by rail and consequently no attempt has been made to compare the surplus produce with that exported.

The revenue sanctioned at its pitch.

The land revenue sanctioned in the Assessment Reports was Rs. 6,32,821, while that actually assessed amounted to Rs. 6,65,491 (fixed Rs. 3,11,586, fluctuating Rs. 3,53,905). The difference is due mainly to the fact that in actual assessment, the revenue of the tracts placed under fluctuating assessment was based on the cropped area of the latest year, while that worked out in the Assessment Reports depended on the area of matured crops in an average of years. The revenue assessed amounts to 87 per cent. of the half-assets, 78 per cent of the one-sixth of gross produce, 99 per cent. of the previous rates standard if applied to the average cropped area and 87 per cent. of it applied to the present cultivated area. The new assessment gives an increase of over 28 per cent. on the assessment of last settlement and of about 20 per cent. over that of the year preceding the revision of assessment.

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Sanctioned rates.

The rates sanctioned for each class of land in each assessment circle are noted below. The incidence of land revenue per acre of matured crops in the whole district is :—

	Rs. a. p.
Fixed	1 9 3
Fluctuating	1 5 2

Tahsíl.	Assessment Circle.	Fixed.						Fluctuating.		
		Cháhi.	Cháhi-Nahri.	Nahri.	Abi.	Cháhi-Sailáb.	Sailáb.	Class I.	Class II.	Class III.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
SINANWAN.	Thal	*0 11 0	*1 0 0	*1 0 0	...	...	...	...	...	...
	Thal Nahri ...	0 13 0	1 6 0	1 3 0	...	...	..	...	...	...
	Pakka	1 0 0	1 8 0	1 3 0	1 4 0	1 5 0	0 12 0	...	...	...
	Bet	...	...	...	...	...	...	1 4 0	0 12 0	0 6 0
MUZAFFARGARH.	Chenáb	1 8 0	2 0 0	1 10 0	...	...	...	Maximum 2 0 0 Minimum 1 4 0 Average about	1 0 0 0 12 0 1 6 0	*Nautor* charged at half rates for first year.
	Sindh	(The same as for fluctuating portion.)						1 4 0	0 12 0	0 6 0
	Pakka	1 8 0	2 2 0	1 9 0	1 11 0	1 11 0	1 2 0	2 0 0	0 14 0	...
	Thal	1 0 0	1 9 0	1 5 0	...	...	1 0 0	...	...	...
ALIPUR.	Chenáb	1 6 0	1 12 0	1 6 0	...	...	...	Maximum 2 0 0 Minimum 1 4 0 Average about	1 0 0 0 12 0 1 2 0	*Nautor* charged at half rates for first year.
	Sindh	(The same as for fluctuating portion.)						1 4 0	0 12 0	0 6 0
	Pakka	1 8 0	1 12 0	1 6 0	1 8 0	1 8 0	1 0 0	1 12 0	0 14 0	...
	Cháhi-Sailáb ...	...	...	...	...	...	...	Maximum 1 6 0 Minimum 1 2 0	1 0 0 0 10 0	... ...

* Revenue fluctuating by holdings.

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Land Revenue.

Method of assessment of revenue.

Assessment fixed and fluctuating.

A system of fluctuating assessment was introduced at last settlement for all lands directly affected by the annual risings of the rivers. This system appeared to have been successful, and it was decided to continue it for such tracts with some improvements. Of the tracts protected from floods by embankments, the sandy tract of the Thal which is beyond the reach of canal irrigation appeared to have suffered much from the inelastic fixed assessment under which it was placed at last settlement, and it was necessary to devise some system for it which should have the advantages of a fluctuating assessment without the complication of a field to field assessment every year, which is not suited to the conditions of the peasants of this tract. The greater part of the canal-irrigated tract enjoys a more or less regular supply of canal water assisted by irrigation from wells, and was considered suited to a fixed assessment. The Pakka Circle of the Alípur *Tahsíl*, however, has not been so fortunate of late as the Puran, an inundation canal which irrigates nearly the whole of the circle, has had its head cut away and has not been so regular in its supply. Wells have also come to be more or less abandoned here and the conditions of irrigation and accordingly of agriculture are much more uncertain. With a few exceptions, therefore, it was considered best to place the whole of this tract under fluctuating assessment, similar to that introduced in the riverain circles. Three systems of assessment have thus been introduced in the district :—

(1) The system of fixed assessment.
(2) The ordinary system of fluctuating assessment.
(3) The Thal system of assessment fluctuating by holdings and shares.

The fixed assessment.

The central canal-irrigated tracts of the Sinánwán and Muzaffargarh *Tahsíls* (*i.e.*, the Pakka and Thal Nahri Circles) have as before been given a completely fixed assessment. The assessment of parts of two villages in the Muzaffargarh Sindh and parts of sixteen villages in the Muzaffargarh Chenáb, which lie inside the protective embankments, has also been fixed, while one village in the Alipur Pakka and part of one in each of the Alípur Chenáb and Sindh Circles have also been placed under the same system. These tracts have a fairly constant supply of canal water and the *rabi* cultivation is almost invariably assisted by wells. A fixed assessment was, therefore, considered to be quite suited to the conditions of these villages and circles. The whole land revenue demand of these lands, from whatever source they may be irrigated, has been fixed for the term of settlement and no part of it will fluctuate from year to year.

The fixed demand will be liable to alterations in the following cases :—

(1). Certificates of exemption will be granted to new wells constructed and old wells repaired under the rules contained in Appeddix VII *a* (to the Settlement Report).

(2). Remissions of water-advantage revenue will be granted under rules given in Appendix VII *b* (to the Settlement Report).

(3). Remissions will be granted on wells going out of use under rules printed in Appendix VII *c* (to the Settlement Report).

(4). Lands to which canal irrigation is extended will be assessed to a fluctuating water-advantage revenue.

Any land subject to fixed assessment which happens to be eroded by the river will be exempted from assessment, and when it is thrown up again and brought under cultivation, it will be assessed to fluctuating revenue smilarly to lands in the nearest village under fluctuating assessment.

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The ordinary fluctuating assessment.

The ordinary system of fluctuating assessment consists in assessing the area of matured crops (after deducting *kharába*) at a rate fixed for each crop in a whole assessment circle or group of villages. Crops have been grouped generally into two classes, class I including the rich crops of wheat, tobacco, cotton, indigo, chillies, vegetables, fruits and sugarcane, and class II all the other crops. The rate for crops included in class I has everywhere been pitched considerably higher than that for class II. Crops matured from whatever source of irrigation (*viz.*, whether *sailáb, nahri, cháhi-nahri, cháhi, cháhi-sailab,* or *ábi*) will be charged at the same rate. A lump assessment has been fixed for every well or *jhallár* to be paid only when it is at work. A well or *jhallár* shall be considered at work when it irrigates one acre or more of matured crops during one agricultural year. Certificates of exemption will be granted under the rules. This lump assessment called *abiána* is not only different in different villages, but it has been raised or lowered from well to well inside one and the same village. The following table shows the maximum, the minimum and the average rate of *abiána* imposed per well and *jhallár* in each assessment circle :—

		WELLS.								JHALLARS.							
		Sinánwán.	*Muzaffargarh.*			*Alipur.*				*Sinánwán.*	*Muzaffaragrh.*			*Alipur.*			
		Bet.	Chenáb.	Sindh.	Pakka.	Chenáb.	Sindh.	Pakka.	Cháhi-Sailáb.	Bet.	Chenáb.	Sindh.	Pakka.	Chenáb.	Sindh.	Pakka.	Cháhi-Sailáb.
Sanctioned ...		5	9	6	7	7	4	5	3	5	5	4	7	6	3	5	5
ACTUALLY IMPOSED.	Maximum	8	16	12	10	15	23	28	10	7	14	10	4	10	6	8	8
	Minimum	1	2	1	2	1	1	1	1	2	1	1	3	1	1	1	1
	Average	6	8½	6	7	7	6	5½	4	4½	5	4½	4	6	3½	4	4

This system has been introduced in the whole of the Alipur *Tahsíl* with the exception of one whole village and parts of two villages, the Sindh Circle of Sinánwán and Muzaffargarh (except parts of two villages, in the latter), six villages (including parts of three) in the Muzaffargarh Pakka, and the Chenáb Circle of Muzaffargarh with the exception of parts of sixteen villages which have been placed under fixed assessment.

Throughout the Sindh riverain, the same set of rates (*i.e.*, class I, Re. 1-4-0, class II, Re. 0-12-0; class III, Re. 0-6-0 per acre) has been adopted, *i.e.*, from the extreme north of the Sindh Circle in Sinánwán down to the extreme south of the Alipur Sindh, the classes of crops will pay the same rates. The differentiation from village to village will consist in the larger or smaller proportion of high or low class crop, while that from field to field will result from the allowance made for failure of crops. The floods of the Indus are so capricious in their nature that the best lands in that riverain may be converted in one year into worthless sand, while in the course of a few years the sandy bed of a stream may be turned into good culturable land. This is why no more differentiation was considered necessary throughout the length of the Sindh circles. On the Chenáb, however, conditions are different, and while clusters of villages consist of rich and very productive land, others have inferior land with plenty of saltpetre in it.

The rent rate also decreases as we go down from the Muzaffargarh into the Alipur Chenáb. In the Chenáb Circles of Muzaffargarh and Alipur, therefore, six groups of villages have been made with graduated rates varying from class I Re. 1-14-0, class II Re. 1 per acre, to class I Re. 1-4-0, class II Re. 0-14-0 per acre.

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The ordinary fluctuating assessment.

To accord lenient treatment to land newly cleared up with the help of *sailáb*, a third class has been provided for the Sindh Circle including *massar* and *samukka*, which are the crops mostly sown on newly broken up lands on the Indus. This class will be assessed at half the rate for second class crops, *i.e.*, at 6 annas per acre. In the Chenáb Circles, however, no particular crops are specified for new lands. Nevertheless the fact remains that sowing a newly broken up field means a lot of trouble and that the produce in the first year is not full. Following the practice which had existed since last settlement, it has been decided to charge a crop on newly broken up land (*nautor*) at half the rate fixed for that crop in that group of villages. This concession will be made only for the first year. The same system has been extended to the Cháhi-Sailáb and Pakka Circles of Alípur and six villages[1] of the Muzaffargarh Pakka, but as no diluvion is possible in these circles, no provision for leniency to *nautor* crops was needed, nor was a third class of inferior crops necessary. In these circles, where there are considerable differences of soil and means of irrigation, the rates have been graduated similarly to the Chenáb Circles. The rates fixed for each group in the different assessment circles are given in the table below—

Assessment Circle.	Group I.		Group II.		Group III.	
	Class I.	Class II.	Class I.	Class II.	Class I.	Class II.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Chenáb (Muzaffargarh)	1 14 0	1 0 0	1 12 0	1 0 0	1 10 0	0 14 0
,, (Alipur)	1 8 0	0 14 0	1 6 0	0 14 0	1 4 0	0 14 0
Pakka ,, ...	2 4 0	1 2 0	2 0 0	1 2 0	1 12 0	1 0 0
Cháhi-Sailáb	1 6 0	0 14 0	1 4 0	0 12 0	1 2 0	0 10 0
Pakka Muzaffargarh	1 14 0	1 0 0	0 12 0	1 0 0	1 6 0	0 14 0
Sindh, of all three *tahsils*	1 4 0	0 12 0				
	Class III. 0 6 0					

Assessment Circle.	Group IV.		Group V.		Group VI.	
	Class I.	Class II.	Class I.	Class II.	Class I.	Class II.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Chenáb (Muzaffargarh)	...	...	...	...	...	...
,, (Alipur)	...	...	...	...	...	...
Pakka ,, ...	1 8 0	0 14 0	1 6 0	0 12 0	1 4 0	0 10 0
Cháhi-Sailáb	...	...	...	...	...	...
Pakka Muzaffargarh	...	...	...	...	...	...

(1) Three wholev illages and parts of three.

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The Thal system of assessment.

The Thal system has been introduced in the Thal of Tahsil Sinánwán, in four villages of the Pakka of *tahsil* Muzaffargarh which depend entirely on wells, and in parts of three villages of the Thal Circle of Muzaffargarh which are beyond the reach of canal irrigation. Altogether the system has been extended to twenty-seven whole villages and parts of three. In the whole of this tract all cultivation depends on well irrigation and all cultivated area is attached to one well or another. These areas attached to wells are divided into specified holdings or shares and a holding or share in a well is either brought wholly under cultivation or left entirely untouched. The conditions of this tract are peculiar. The holdings are small with reference to the cultivated area, and the cultivation is uncertain and not very profitable. While on the one hand the landowners cannot stand a fixed demand, on the other they are too ignorant and poor for a fluctuating field to field assessment. The system of assessment introduced may be described as follows: Every well holding, whether cultivated or not, has been assessed to a sum as land revenue, and this sum will be recovered whenever the area sown with crops in a whole year is not less than half an acre in a share of or a holding inside a well and one acre in an entire well. Wells newly constructed or cleared from *dals* (old disused wells) will get certificates of exemption from payment of revenue for varying terms under the rules, and the whole of the revenue of the holdings attached to such wells will be irrecoverable during the period of exemption. The total revenue assessed on the tract amounts to Rs. 6,120. The assessments have been so framed that the holdings under cultivation should on an average of five years have given a revenue of Rs. 4,698. Any well which is newly constructed in the *shamilat* (common waste) will after the expiry of the period of exemption pay a revenue of Rs. 8 if fully at work. Every peasant will thus know the exact amount of revenue which he will have to pay if he undertakes to cultivate his land, and will at the same time have the advantage of not being called upon to pay any revenue at all during the years when owing to drought or other causes he cannot afford to bring his land under the plough. Detailed rules regulating this system of assessment are given in Appendix VII D. (to the Settlement Report).

Gardens and mango-trees.

There are some valuable gardens in the district, and the mango trees are a source of considerable income. In many places they belong to or are mortgaged to others than the owners, or mortgagees of land. It was unfair that the owner of land should pay the whole assessment, while the owner of the garden or trees enjoyed the large profits without contributing anything at all towards the Government demand. A light assessment has, therefore, been imposed on the gardens and detached mango trees as part of the fixed assessment in tracts subject to fixed assessment and as a separate fixed demand in the Pakka Circle of Alipur which has been placed under fluctuating assessment. The trees and gardens in the riverain tracts and the Cháhi-Sailáb Circle which are not numerous have not been separately assessed and will only pay land revenue at the crop rates fixed for first class crops. The total garden *jama* is Rs. 7,417 distributed as follows:—

	Rs.
Sinánwán	984
Muzaffargarh	5,077
Alipur	1,356

This revenue will be remissible wholly or in part in case of deterioration or destruction of the garden or mango trees.

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Extended canal irrigation.

At last Settlement it was arranged that all land broken up with the aid of canal water in wells and *pattis* not assessed as canal-irrigated should be assessed to a fluctuating *jama* at a rate of 6 annas in Sinánwán and 8 annas in the other two *tahsíls* per acre sown with crops. A similar provision has now been made and an uniform rate of 10 annas per acre has been sanctioned for extended canal irrigation. It was, however, noticed that the increase in revenue from this source in past years was not at all commensurate with the increase of canal irrigation. The rule exempting whole wells and *pattis* from assessment on extended canal irrigation was unnecessarily liberal for owners of divided holdings who were assessed to no revenue, and who in case of cultivation of their lands, with the aid of canal water, remained exempt from assessment because one of the owners in the well or *patti* paid a small revenue for his *nahri* cultivation. It has now been decided to charge the water-advantage revenue on all land irrigated from a canal in holdings not assessed as canal-irrigated. This revenue will fluctuate from year to year with the area of matured crops. A list has been prepared in every village, of holdings which have not been assessed as canal-irrigated or which are lying waste and have been assessed to no land revenue. A copy of this list has been filed with the Settlement Record and another has been retained by the patwári who will send up a statement every year with his annual papers, showing how much land has been irrigated in each such holding, and on how much area crops have been matured. This statement will afford an effective check on these fluctuating assessments.

Provision for introduction of fluctuating assessments in case of villages placed under fixed assessment.

In villages which have been placed under fixed assessment, provision has been made for the introduction of a fluctuating assessment during the currency of this settlement if (1) the numerical majority of the proprietors (excluding mortgagees) ask for it, or (2) the revenue due from any considerable portion of the holdings has fallen into arrears, or (3) the Deputy Commissioner thinks that the village is better adapted for a fluctuating assessment. In such cases a report will be submitted for the sanction of the Financial Commissioner.

Total land revenue.

The land revenue now assessed is Rs. 6,65,491 :—

	Rs.
Fixed	3,11,586
Fluctuating	3,53,905

against Rs. 5,18,035 assessed at last Settlement and Rs. 5,56,884 recovered in the year preceding the announcement of revised assessments. The increase has been 28 and 20 per cent. against the two figures, respectively.

Revenue on dates.

There is a very large number of date trees in the district which form a source of regular income to the owner. An assessment of Rs. 22,889 was sanctioned for female trees in the whole district at last Settlement, but in announcing his assessments Mr. O'Brien, the then Settlement Officer, did not find it practicable to go above Rs. 19,126. This *jama* was subsequently reduced on account of transfer of villages to adjoining districts but adding the date revenue assigned, the date *jama* of the villages now included in the district amounted to Rs. 19,133. An enumeration of date trees was made in August 1899 and again in August 1900 and the number of female trees then ascertained formed the basis

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Revenue on dates.

of the present assessment. The following figures explain themselves:—

		Sinánwán.	Muzaffar-garh.	Alipur.	District.
Last Settlement ...	Trees assessed	116,049	237,080	90,676	443,805
	Revenue ... ... Rs.	3,691	11,101	4,341	19,133
	Rate per tree ... ,,	0-0-6	0-0-9	0-0-9	0-0-8
Present Settlement.	Number of female trees	184,422	470,105	184,472	838,999
Sanctioned ...	Revenue ... ... Rs.	10,960	21,687	8,646	41,293
	Rate per tree ... ,,	0-0-11	0-0-9	0-0-9	0-0-9
Imposed ...	Revenue ... ... ,,	8,354	21,739	8,806	38,999
	Rate per tree ... ,,	0-0-9	0-0-9	0-0-9	0-0-9
Increase per cent. on assessment of last Settlement		126	96	105	104

It will be seen that while the number of female trees has increased by nearly 89 per cent. since last settlement, the revenue has been more than doubled. It may be noted that, calculating the profits from an individual tree, they appear to be fairly large, but when a large number of trees has to be dealt with, the net profits of the owner are found to be comparatively smaller. Basing the calculation upon estimates and the rates sanctioned at last settlement, a rate of 1 anna per female tree was proposed for the greater part of the Sinánwán *tahsíl*. In announcing the assessments, however, it appeared that, in consequence of the very large increase in the number of trees, the increase brought out by the above mentioned rate would be excessive and would be acutely felt. The assessments were, therefore, pitched lower, giving an average rate of 9 pies per tree in that *tahsíl*. The assessments proposed for the other two *tahsíls* were more moderate and the total assessments imposed on female date trees in the whole district give an incidence of 9 pies per female tree. The increase in date revenue amounts to 104 per cent. over the assessment of last settlement. The rates levied in individual cases vary from 2 pies to 1 anna 3 pies per tree. Not only is the rate different for different villages, but within one village different blocks have been treated differently and assessed at a higher or lower rate. The assessment is a fixed one subject only to a remission for revenue-paying trees which might be washed away by one of the rivers. The present assessment is a full one and appeared at the announcement of assessment to be all that could be paid by the owners without difficulty. If the number of trees goes on increasing at the same rate as it has done since last settlement, the enhancement of revenue at the next settlement will have to be made very cautiously.

Revenue on grazing land.

The grazing land attached to villages measured 10,00,308 acres at last settlement and was assessed to Rs. 32,644. The present waste area is 920,404 acres. The assessment now imposed on this grazing land is Rs. 27,843 (fixed Rs. 10,771, fluctuating Rs. 17,072). The decrease in revenue is justified by the decrease in the waste area which has been brought under cultivation, and the large increase of revenue which has been obtained from the cultivated lands and the date trees which grow mostly on waste area. Were it not for the advisability of retaining a separate grazing assessment in the Thal, it might have been convenient to throw this small sum into the land revenue and abolish a separate grazing assessment. The measure would have been a popular one with the peasants, and might be adopted with advantage at the next settlement. The assessment is fixed

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Revenue on grazing land.

in tracts under fixed assessments or under the Thal system of assessment, and will fluctuate from year to year in tracts which have been given a totally fluctuating assessment. In the former case, the total assessment has been fixed for each village, in the latter a rate per 100 acres of waste has been fixed and will be levied on the area recorded as waste every year. In the Sinánwán Thal, where the grazing revenue forms a very considerable part of the total revenue, the number of cattle varies very largely with the rainfall, and in years of drought the capacity of landowners to pay the grazing revenue is very seriously affected. In this circle the grazing assessment announced will be treated as the maximum revenue recoverable, and in bad years such remissions will be granted by the Collector, subject to the control of the Commissioner, as appear necessary in each village.

The revenue from all sources and forecast of the probable financial results of the new settlement.

The total revenue from all sources will now be as follows :—

Land Revenue including gardens.	Fixed	Rs. 3,11,586	Rs. 6,65,491
	Fluctuating	„ 3,53,905	
Dates fixed		„ 38,999	
Revenue on grazing land.	Fixed	„ 10,771	„ 27,843
	Fluctuating	„ 17,072	
Total ...	Fixed	„ 3,61,356	„ 7,32,333
	Fluctuating	„ 3,70,977	

The figures of fluctuating revenue are only estimates based on the cropped area of 1900-01 in Sinánwán and 1901-02 in the other two *tahsíls.* They will vary from year to year with the area of matured crops, and if *kharába* is liberally deducted as it is intended to be, the revenue should largely decrease in bad years, while, on the other hand, years of copious floods and steady canal irrigation in Alípur should lead to extension of cultivation and consequently to an enhancement of revenue. The above figures are compared in Appendix V to the Settlemet Report with the revenue assessed at last settlement and that recovered in the year preceding the revision of assessments, as also with the revenue which should have been assessed at the sanctioned rates. The increase compared with last settlement amounts to Rs. 1,62,521, or 29 per cent., while the above figures are Rs. 1,25,547, or 21 per cent. in excess of the revenue realized in the year preceding the revision of assessments. The estimate of increase made in the forecast report of this settlement was Rs. 1,10,000, so that the expectation has been more than realized.

The figures of 1902-03, which was a distinctly bad year for tracts under fluctuting assessment, show a decrease of about Rs. 20,000 in land revenue compared with the above estimate, thus—

	Rs
Fluctuating land revenue sanctioned in Statement B, ...	3,53,905
Fluctutaing land revenue 1902-03, including reverue remitted on certificates of exemption	3,33,592

It will be safe to expect that the total revenue of the district will vary from Rs. 7,00,000 to Rs. 7,50,000, and that it may rise higher with extension of cultivation.

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Internal distribution of revenue. Distribution of fixed land revenue on villages.

In tracts placed under fixed assessment the land revenue to be paid by each village was arrived at with reference to the sum which, at my village inspections, I considered the village capable of paying, after taking all the circumstances into consideration, the half assets *jama* of the village worked out separately for each village in *tahsíl* Sinánwán, or calculated at the guide crop rates sanctioned for the other two *tahsíls*, and the revenue that should have been assessed on it at the revenue rates sanctioned for the assessment circle. The former two were the main guides as the last figure had to be raised or lowered according as the village was above or below the average. Indeed, what I did was to total up the assessments proposed by me in my inspection notes for the different villages. The total was compared with the sanctioned revenue and generally came very near the mark. The difference was made up by altering my figures with reference to the half assets *jama*. In framing my village assessments, I went freely above and below the sanctioned rates according to the circumstances of individual villages.

Distribution of revenue on wells and *pattis*.

Having arrived at the village assessment, I proceeded to assess the wells and *pattis* in the following manner:—In the Sinánwán *tahsíl* I had with one solitary exception seen every well and *patti* that had to be placed under fixed assessment. These I had classified in each village with reference to the quality of soil, means of irrigation, vicinity to markets, resources of the owner and other considerations affecting the paying capacity of a landowner. In making my inspections I had noted what ratio the rate per acre assessed on one class of wells and *pattis* should bear to another. In the other two *tahsíls*, I had not the time to do all the well inspections myself, but I trained the Settlement Tahsíldárs and made them do exactly what I had done in Sinánwán. At the time of my village inspection I checked some 20 per cent. of the classification done by them, and also inspected every well or *patti* regarding which the owners differed from the opinion of the Tahsíldár and representatives of the village and decided which class it should be placed in. Where I was not satisfied with the classification, I had it done over a second time and checked it again. I then had well lists prepared, showing particulars of cultivation, the average cropped area of seven years and the class in which each well and *patti* had been placed at the time of inspection. Seperate all-round rates were adopted for each class with reference to the ratio noted in my inspection note and the assessment thus arrived at for each well or *patti* was raised or lowered with regard to all the circumstances of that particular well or *patti*. The sums so fixed for different wells and *pattis* were increased or decreased proportionately until the total assessment to be imposed on the village was obtained. After announcing the total assessment of each village I proceeded to determine the assessment of each well or *patti* and discussed the case with the landlords as if it were a village. I did not hesitate to vary the amount put down by me against each well or *patti*, if with reference to the hundred-and-one reasons that were put forward before me, I was satisfied that the assessment ought to be more or less. If, after determining the assessment of the wells and *pattis* individually, I found that I had lost a few rupees in the total assessment of the village, I did not try to make up the difference, but announced that I had reduced the total by so much.

Distribution of assessment over holdings.

Directly the assessment of wells and *pattis* was finished, the work of distribution over holdings was taken in hand. For this purpose materials had been prepared beforehand. A *fard bachh khátewár* had been prepared showing the cultivated area and the average cropped area for seven years for each holding. The general rule adopted was to distribute the revenue fixed by me for each well and *patti* on all its holdings uniformly with reference to the cropped area, except where I had

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Distribution of assessment over holdings.

noted that particular holdings were to be assessed higher or lower than the others. Where certain holdings had shares in well irrigation and others had not, a sum obtained by multiplying the area irrigated by the well with the difference of the *cháhi nahri* and *nahri* rates was deducted from the total assessment, and spread over the area so irrigated, the balance being distributed evenly on all the holdings. This work was completed in a few hours after I had announced the well and *patti* assessments, and the Extra Assistant Settlement officer announced the distribution by holdings to the *zamíndárs*. Cases where the distribution of revenue on cropped area resulted in undue leniency to lazy co-sharers who had land equally good with that of their brothers, or those in which the co-sharers objected to the method of distribution, were brought to my notice, and I decided at once, with due regard to the circumstances of each case whether the revenue should be distributed with reference to the cropped area or the cultivated area, or if it should be apportioned according to the original shares of the partners in the common holding. The announcement of the assessment of a village and its distribution over wells and *pattis* and then over holdings thus took one day or in case of large villages two days at most. It meant much hard work, but saved the people the trouble of assembling over and over for the distribution of revenue, and gave every landowner the satisfaction of discussing his case personally with the Settlement Officer.

Gradation of crop rates in assessment circles placed under fluctuating assessment and differentiation of *ábiána* (lump assessment).

With the exception of the Sindh circle where one set of crop rates has been adopted throughout the whole length of the district, graduated sets of rates have been introduced in all the assessment circles which have been placed wholly or partially under the (ordinary) system of fluctuating assessment. The lump assessment on wells and *jhallárs* has been varied from village to village and also within the same village. This differentiation which required much care and consideration was done in the following manner. The villages included in an assessment circle were first divided into groups with reference to the productiveness of the lands and other considerations and an average lump assessment was fixed for each village taken as a whole. In forming the groups the fertility of the lands of the adjoining villages had to be borne in mind, and when lands of similar quality happend to fall within two groups, because they were situated in two villages which differed from each other taken collectively, the difference was made up by charging on the lands placed within the lower group a comparatively heavier *ábiáná, i.e.,* by fixing the lump assessment at a somewhat larger rate per acre of irrigated crops. Much minute comparison had to be made in fixing the lump assessment in different villages, and different groups with a view to ensure equality of treatment regarding similar lands lying in different villages which adjoined each other. This necessitated the comparison of the *ábiáná* assessed on the wells, &c., lying near the boundaries of each village with that assessed on every one of the wells of other villages adjoining the boundary. At the same time the lump assessment had to be very largely raised or lowered within each village to differentiate sufficiently between good and bad wells whose lands were to pay revenue at the same crop rates. The lump assessment was fixed not only with reference to the quality of land and the crops raised on the well or *jhallár,* but also to the area irrigated by it on an average of years. This involved much time and labour but resulted in an equitable differentiation of good and bad lands under fluctuating assessment.

Distribution of the grazing assessment

The distribution of the demand for grazing revenue of a village has been arranged in one of three manners —

(1) where the demand is small and the grazing area limited, the landowners have agreed to pay the demand ratably to land revenue;

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Distribution of the grazing assessment.

(2) where the grazing area is large and the cattle grazing in the village belong mostly to the landlords, or where large pieces of waste belong to a few men who allow cattle from other villages to graze there on payment of *tirni*, the landowners have usually agreed to distribute the grazing assessment on the waste area; and

(3) where the grazing area is large and cattle are numerous and belong to others than landowners, it has been arranged that the cattle should be enumerated every year by Munsiffs appointed for the purpose, and the following fees charged per head:—

	Cows.	*Cow buffaloes.*	*Goats and sheep.*
	Annas.	Annas.	Anna.
Sinánwán	5	10	1
Muzaffargarh and Alipur	4	8	1

Similar rates fixed for collection of *tirni* at last settlement within the villages were six annas per cow twelve annas per buffalo, and one anna per goat or sheep. The collections will be paid into treasury towards the grazing revenue, and any deficit will be made good by the landowners in proportion either to their land revenue or their waste area, according to the understanding arrived at in each case. Similarly the surplus, if any, will be divided among all the landowners. It has also been arranged in some cases to group together a number of villages for the payment of *tirni*. The total grazing demand of these villages will remain unaltered, but this sum will be capable of re-distribution periodically over the villages included in the group with reference to the number of cattle, either on the basis of the quinquennial enumeration made under the orders of the Director of Land Records and Agriculture, or on an enumeration in the intervening years in cases of necessity. This system has been adopted experimentally in a few cases, but should be further extended if it proves successful, as it saves cattle from having to pay *tirni* in a number of villages. In some cases, groups have been formed without any provision for redistribution of the demand, each village agreeing to pay its demand without making any collections from cattle coming from other villages of the group.

Other matters connected with the assessment. Instalments.

The instalments for payment of revenue will be the following throughout the district:—

Kharif	15th December. 15th January.
Rabi	15th June. 15th July.
Date revenue	15th August.

No alteration has been made in the time of the instalment for payment of date revenue as the fruiting season ends in the beginning of August, and the middle of that month is very appropriate for payment of revenue from this source. The other instalments have been put off by a fortnight in each case to allow sufficient time for the sale of produce and in case of fluctuating assessments to enable the assessment and *bachh* papers to be completed. In villages under fluctuating assessment, the revenue to be paid at each harvest will be that assessed on the crops of that harvest. In some of the riverain villages, however, where the area of *kharíf* crops is very small, it has been laid down that the whole land revenue shall be paid in *rabi*. The grazing revenue will be collected in *rabi*, as it will not be possible to ascertain the waste area until after the *rabi* crop-inspection. In the villages placed under the Thal system of fluctuating assessment

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Other matters connected with the assessment. Instalments.

where the *kharíf* crops are insignificant, the whole land revenue will be paid in *rabi* while the grazing revenue will be collected in *kharíf*, as the end of summer is the time when the number of cattle grazing in the Thal is largest, particularly if the Thal has been blessed with rain. In tracts placed under fixed assesments, it has been decided in case of each village what proportion of the revenue should be paid in each harvest with reference to the area under autumn and spring crops. The amount to be collected at each harvest will be divided equally into the two instalments fixed for that harvest. The whole date revenue will be collected in one instalment. For sugarcane-growing villages a third *kharíf* instalment was formerly allowed in February, but this has now been dispensed with as unnecessary, as the second *kharíf* instalment (15th January) will be quite late enough.

Cesses.

The cesses sanctioned at last Settlement were—

	Per cent.
Patwárí	3 to 6
Lambardárs	5
School	1
Road	1
Dák	$\frac{1}{2}$
Local rate	$6\frac{1}{4}$
Total	$16\frac{3}{4}$ to $19\frac{3}{4}$

The maximum for the patwárís' cess was 6 per cent. with 8 to 12 annas per cent. as stationery allowance. The rates gradually went nearer the maximum. The local rates were consolidated later on, and a rate of Rs. 10-6-8 per cent. of land revenue was sanctioned including the School, Road and Dák cesses. Roughly speaking, the cesses being paid before revision of assesment were about 21 per cent. of the revenue. An uniform patwárí cess of Rs. 6-4-0 per cent. (including the stationery allowance) has now been sanctioned and, leaving the other rates intact, the following cesses will be charged in future for every Rs. 100 of revenue:—

	Rs.	a.	p.
Lambardár	5	0	0
Patwárí	6	4	0
Local rate	10	6	8
Total	21	10	8

NOTE.—The Patwárí cess has since been abolished and the Local rate reduced to Rs. 8-5-4 per cent. of revenue by Punjab Government notification No. 87, dated 2nd April 1906.

Assigned revenue.

With the exception of one *jágír* consisting of the revenue of village Lálpur, under fluctuating assesment (which amounted to Rs. 2,873 last year, and should at the revised rates have brought in Rs. 3,609) enjoyed by Nawáb Abdullah Khan and others of Dera Ismáil Khán, the assignments in the district are all petty *muáfis* continued mostly for maintenance of institutions like *khángáhs* (tombs), *takiás* (resting places) or *dharmsálás*. The case of each *muáfi* was investigated. There were some petty assignments which had been granted in 1858 by the Chief Commissioner to individuals in perpetuity or during maintenance of gardens. There appeared to be no use or reason for the continuance of most of these, and as it was held by the Punjab Government in 1879 (*vide* Punjab Government letter No. 1052, dated 22nd September 1879) that the Chief Commissioner could only grant *muáfis* for term of settlement or for life under the rules laid down in Revenue Circular No. 37, such of those *muáfis* as should have lapsed under the rules were now confiscated, while recommendations were submitted for the continuance of such of them as were attached to institutions. Other cases

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Assigned revenue.

requiring fresh sanction were also duly reported and orders of the Financial Commissioner and Punjab Government were obtained. The assignments which have now been continued are shown in the table below:

Tahsil.	Amount assigned before revision of assessment.		Amount now assigned.
	In perpetuity.	Rs. a. p.	Rs. a. p.
Muzaffargarh (Lálpur)	... ...	2,873 0 0	3,609 0 0
For life, term of settlement or during maintenance of institutions.			
Muzaffargarh		274 0 0	381 0 0
Alipur		121 7 0	164 0 0
Sinánwán		33 0 0	20 0 0
	Total ...	3,301 7 0	*4,174 0 0

*Fixed Rs. 453 ... ... { Land revenue 221 0 0; Dates 232 0 0 }
Fluctuating Rs. 3,721 ... ... Land revenue.

Notwithstanding a decrease in the number of petty assisgnments, the total assigned land revenue has increased in consequence of the general rise in the assesment.

Deferred assessments.

Assessment has been deferred in this settlement only in case of wells newly constructed. Exemption from the *cháhi* assessment has been granted for the full term of twenty years to wells which have been built to irrigate lands not previously assessed at irrigated rates and for a term of ten years to wells which have been constructed to replace old wells. The exemption was calculated in the following manner in tracts under fixed assessment. In respect of wells irrigating lands which depend entirely on well irrigation, the whole revenue of the lands irrigated from the new wells was remitted for the period of exemption. Where the lands received canal water or *sailáb*, the remission given amounted to the difference between the revenue at *cháhi-nahri* or *cháhi-sailáb* rates and that which would have been paid on the area commanded by the well at *nahri* or *sailáb* rates respectively. In tracts under totally fluctuating assessment, the lump assessment imposed on the well will not be recovered during the period of exemption. The *chak* or *gat* wells, *viz.*, those in which the part of the cylinder sunk below the water level is built of wood and the rest of masonry have been treated as masonry wells for purposes of exemption. Since the announcement of the assessment, the rules have been further relaxed and provision has been made for the grant of an exemption up to ten years in favour of wells which may be repaired, and also in favour of partially lined wells which are expensive. The rules to be acted upon in future are those sanctioned by Government in their Revenue Secretary's letter No. 70, dated 18th April 1903, Punjab Government Proceedings for April 1903, No. 19—22. The total exemption granted to new wells for various periods is noted below:

Tahsíl.	Rs.
Sinánwán	5,207
Muzaffargarh	6,816
Alípur	4,803
District	16,826

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Secure and insecure areas

In accordance with the instructions contained in paragraph 552 of Douie's Settlement Manual, the tracts wholly or partially under fixed assessment have been classified into secure and insecure areas. The only part of the district classed as insecure is the Thal circle of Sinánwán. The land revenue assessment of this circle will fluctuate, but the grazing assessment has been fixed for term of settlement. With a view to give relief in years of drought or cattle disease when cattle die out or migrate to other parts and the collection of grazing dues becomes impracticable, it has been arranged to treat the grazing assessment as the maximum recoverable. The Collector will in bad years grant such remissions out of the demand as are necessary, subject to the control of the Commissioner, under the rules sanctioned by Punjab Government letter No. 186, dated 5th September 1903. In tracts under fixed assessment of land revenue, whenever there is a contraction of more than 25 per cent. in the cropped area of a village against the cropped area which formed the basis of its assessment, it should be considered whether any suspension of revenue is needed in the village."

Term of settlement.

The second regular settlement has been sanctioned for a term of twenty years. The revised assessments have taken effect from *kharíf* 1901, in *tahsíl* Sináwán, and *kharíf* 1902 in the other two *tahsíls*, and the term will expire in *rabi* 1920 and *rabi* 1921 respectively.

Superior proprietary rights of Government.

Government enjoyed superior proprietary rights in lands situated in eight villages with a total area of 3,574 acres, including 1,975 acres of cultivation. The total income of Government from this source amounted, in the whole district, to Rs. 93 per annum. The income was very small and there was no advantage worth consideration in maintaining the right of Government to be considered superior proprietor of these small areas. Under the orders conveyed in Punjab Government letter No. 246, dated 27th September 1902, the Senior Secretary to Financial Commissioner, Government has relinquished its right to recover these dues and to be called superior proprietor of these lands. In some of the villages the income was merely nominal. In others where the amount was somewhat larger, the fact of the payment hitherto made by landowners on this account was, under the orders of Government, borne in mind in assessing the villages to land revenue.

Village directory.

In accordance with paragraph 4 of revised Revenue Circular No. 62, a village directory of the Muzaffargarh district was prepared and published.

Dastúr-ul-amal.

At the close of the recent settlement operations a detailed *dastúr-ul-amal* was drawn up for the guidance of the patwárís and Revenue officers, containing instructions regarding crop inspection, assessment and the preparation of records and statements, in accordance with the orders passed during the settlement. The *dastúr-ul-amal* was approved by the Settlement Commissioner and printed. A complete vernacular translation of it has also been printed for the use of subordinate revenue officials.

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Size of proprietary holdings.

The average size of a holding in each circle is shown in the table below :—

Tahsil.	Circle.	Total area.	Number of holding.	Average area per holding. Cultivated.	Un-cultivated.	Total.
		Acres.		Acres.	Acres.	Acres.
Sinawan.	Thal	424,561	1,382	4	303	307
	Thal nahri	82,555	718	11	104	115
	Pakka	184,757	9,965	7	12	19
	Bet	151,624	4,839	9	22	31
	Total ...	843,497	16,904	8	42	50
Muzaffargarh.	Chenáb	135,814	9,741	6	8	14
	Sindh	76,231	2,687	7	21	28
	Pakka...	230,371	18,060	5	8	13
	Thal	139,403	5,554	4	21	25
	Total	581,819	36,042	5	11	16
Alipur.	Chenáb	118,514	8,163	6	9	15
	Sindh	192,773	1,952	15	84	99
	Pakka...	162,639	9,696	7	10	17
	Chábi-sailáb	114,631	5,205	6	16	22
	Total	588,557	25,016	7	17	24

NOTE.—The figures are taken from the Assessment Reports.

With reference to the cultivated area, the average size of holdings is very small in every assessment circle except the Sindh circle of Alípur, in which there are several very large landowners. The belongings of these few men have raised the average cultivated area of each holding to 15 acres, but it would be wrong to infer that the majority of the holdings in that circle are of about, this size. Of the other assessment circles, the smallest cultivated holdings are met with in the Thal circle, having 4 acres of cultivation each. And each holding belongs usually to more persons than one. The average cultivation per holding in the Muzaffargarh Pakka is only 5 acres, which is again very small. It may be mentioned here that some of the hodlings in the Pakka and Thal circles of Muzaffargarh are held on a very large number of shares, going sometimes higher than a lakh. It should, however, be borne in mind that the figures showing the average area per holding are no indication of the area owned by each individual, as in most cases a whole well is the joint property of several co-sharers ; and while it is returned as one holding, the owners are numerous. An attempt was made in the Assessment Report of the Sináwán Tahsil to arrive at the correct average area owned by a landlord in each circle and the figures were examined with reference to the minimum cultivated area required for the maintenance of an average peasant family. The following extract from the Assessment Report will be found interesting :—

" In order to arrive at a correct idea of the extent of individual property, the following statement has been prepared from the papers of the patwárís

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showing the amount of land owned by the proprietors in each circle in the whole *tahsil*, and thus the correct number of landowners and the area owned by them has been obtained, wherefrom the average area owned per individual has been ascertained. The figures have been arranged into classes according to the size of proprietary holdings:—

Circle.	Class I. Owning cultivated area less than one acre.				Class II. Owning cultivated area between 1 and 5 acres.				Class III. Owning cultivated area between 5 and 10 acres.				Total.			
	Number of proprietors.	Percentage of the total number of proprietors in the circle.	Total cultivated area.	Average cultivated area per head.	Number of proprietors.	Percentage of the total number of proprietors in the circle.	Total cultivated area.	Average cultivated area per head.	Number of proprietors.	Percentage of the total number of proprietors in the circle.	Total cultivated area.	Average cultivated area per head.	Number of proprietors.	Percentage of the total number of proprietors in the circle.	Total cultivated area.	Average cultivated area per head.
Thal ...	674	23·5	...	...	1,966	68·6	3,288	1·6	159	5·5	1,178	7·4	2,799	97·6	4,466	1·6
Thal nahri ...	119	7·7	...	...	1,038	67·4	1,913	1·8	195	12·7	1,377	7·1	1,352	87·8	3,290	2·4
Pakka ...	497	4·5	...	...	7,503	68·6	14,963	2	1,503	13·7	11,431	7·6	9,503	86·8	26,394	2·8
Bet ...	59	2·2	...	...	1,744	63·6	3,427	2	351	12·8	2,615	7·4	2,154	78·6	6,042	2·8
Total ...	1,349	7·5	...	...	12,251	67·7	23,591	1·9	2,208	12·2	16,601	7·5	15,808	87·4	40,192	2·5

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Circle.	Class IV. Owning cultivated area between 10 and 15 acres. Number of proprietors.	Class IV. Percentage of the total number of proprietors in the circle.	Class IV. Total cultivated area.	Class IV. Average cultivated area per head.	Class V. Owning cultivated area between 15 and 20 acres. Number of proprietors.	Class V. Percentage of the total number of proprietors in the circle.	Class V. Total cultivated area.	Class V. Average cultivated area per head.	Class VI. Owning cultivated area between 20 and 35 acres. Number of proprietors.	Class VI. Percentage of the total number of proprietors in the circle.	Class VI. Total cultivated area.	Class VI. Average cultivated area per head.	Class VII. Owning cultivated area between 35 and 40 acres. Number of proprietors.	Class VII. Percentage of the total number of proprietors in the circle.	Class VII. Total cultivated area.	Class VII. Average cultivated area per head.
Thal ...	51	1·8	584	11·5	10	·4	202	20·2	6	2	129	21·5	...	...	2	...
Thal nahri ...	82	5·4	1,050	12·8	35	2·3	689	19·7	48	3·1	1,313	27·3	3	·2	98	32·6
Pakka ...	592	5·4	7,655	12·9	297	2·7	5,246	17·7	317	3·0	8,431	26·6	52	·5	1,994	38·3
Bet	158	5·9	2,106	13·3	81	2·9	1,374	17	145	5·2	3,966	27·4	18	·7	776	43·1
TOTAL ...	883	4·8	11,395	12·9	423	2·4	7,511	17·8	516	2·9	13,839	26·8	73	·4	2,870	39·3

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Circle.	CLASS VIII. Owning cultivated area between 40 and 50 acres.				CLASS IX. Owning cultivated area between 50 and 100 acres.				CLASS X. Owning cultivated area over 100 acres.				TOTAL.				
	Number of proprietors.	Percentage of the total number of proprietors in the circle.	Total cultivated area.	Average cultivated area per head.	Number of proprietors.	Percentage of the total number of proprietors in the circle.	Total cultivated area.	Average cultivated area per head.	Number of proprietors.	Percentage of the total number of proprietors in the circle.	Total cultivated area.	Average cultivated area per head.	Number of proprietors.	Percentage of the total number of proprietors in the circle.	Total cultivated area.	Average cultivated area per head.	Cultivated area belonging to Government.
Thal ...	1	...	66	66	...	...	32	...	...	...	38	...	2,867	100	5,519	1·9	46
Thal nahri ...	9	·6	358	39·8	10	·6	744	74·4	1	...	667	667	1,540	100	8,209	5·3	2
Pakka ...	47	·4	2,210	47	92	·8	6,360	69·1	43	·4	13,558	315·3	10,943	100	71,848	6·6	58
Bet	41	1·5	1,726	42·1	61	2·2	4,649	76·2	82	·3	23,076	281·4	2,740	100	43,715	15·9	1,411
TOTAL ...	98	·5	4,360	44·5	163	·9	11,785	72·3	126	·7	37,339	296·3	18,090	100	129,291	7·1	1,517

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Before dealing with the figures given in the above table, it will be interesting to see, with regard to the agricultural conditions of each assessment circle, the minimum size of a holding required for the sustenance of an average *zamíndár* family. Taking a man, his wife and two small children as the standard *zamíndár* family, the extent of cropped area needed for their bare maintenance—(1) if the man cultivates the land himself and (2) if he works through tenants—is given in the following table, by circles :—

Circle.	Cropped area if cultivated by landlord.	Cropped area if cultivated by tenants.
	Acres.	Acres.
Thal	40	200
Thal nahri	15	45
Pakka	13	37
Bet	18	40

Taking the Thal circle first, a cropped area of 40 acres will, in ordinary years, yield the following income :—

	Acres.	Value. Rs.
Wheat	27	259
Cotton	4	32
Other crops	9	72
Total	40	363
Deduct—		
	Per cent.	
Fodder	16·5	...
Menials' dues	18·8	...
Total	35·3	128
Net income	...	235

Expenses—	Sers.	Rs.	
Diet at 1½ sers a day	547		
Wheat	200	8	19
Other grain	347	11	
Clothing	...	...	10
Seed at Re. 1-8-0 per acre	...	...	60
Replacing of bullocks	...	...	15
Fees paid for manure	...	..	10
Three servants at—			
8 annas a month each, and 36 sers of grain a month each ...	...	18	66
Wheat	400	16	
Other grain	898	30	
Harvest fees of servants	...	2	
Blanket	...	...	2
Miscellaneous	...	...	10
Revenue at the present average rate of Re. 1, including cesses	...	...	40
Total ...	...	...	232

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It should be remembered that the expenses have been placed as low as possible, and full advantage has been taken of the work that the wife and children can do. An allowance of 1½ sérs of grain has been made per diem. Ordinarily the scale would be as follows :—

	Ser a day.
Man	¾
Woman	¾
Two children	¾
Total	2¼

But considering that wild berries, *pilhú* (*Salvadora oleoides*) and turnips form a substantial part of the food of the inhabitants of the Thal, particularly of women and children during certain portions of the year, the allowance has been reduced to 1½ ser. A man requires one turban, two *kurtas*, two *chaddars*, and two *manjhlis* a year, besides a quilt which lasts several years. These clothes are calculated to cost about Rs. 6 a year. Similarly a woman's clothing cost about Rs. 5 a year, and Rs. 2 at least migh be allowed for two children making a total of Rs. 13. But only Rs. 10 have been allowed under the head. The average cultivation per well in the Thal is 14 acres and the average number of yokes per well is three. So nine yokes should be required for working a cropped area of 40 acres. But for purposes of these calculations only six yokes have been taken as working the whole area of 40 acres, which is possible only under exceptionally favourable circumstances. For six yokes, six servants would usually be needed, but taking the landowner to do the work of one and the wife and children that of two, only three servants have been provided for. A bullock has usually to be replaced after four years, and so out of twelve bullocks at least two must become useless every year. The average price of a bullock in the Thal is Rs. 40, but considering that the landlord must have one or two cows, whose offspring will in time be used as bullocks, and that he sometimes buys young ones from menials and other local men at small prices, only Rs. 15 have been allowed for replacing bullocks. The sum will suffice, provided that there is no cattle disease. Every well-owner must keep a flock of goats and sheep on his well, and the fee paid on that account to the owner of the flock is usually equal to the amount of wheat sown as seed. This would amount to Rs. 60, but it has been assumed that the landlord will have some sheep and goats of his own, and so only Rs. 10 have been entered in the account as manure fees (*ahli*). Only Rs. 10 have been allowed for miscellaneous expenses. These expenses include food given to guests and cost of entertainment of the priest who is bound to visit every *zamíndár* once a year, and has to be paid a small fee in cash in addition to his food, which must be sumptuous. The above calculations will show that a man needs at least 40 acres of crops to make both ends meet. If the landlord gives the land to tenants, being too lazy to do the work himself, he cannot live on anything less than 200 acres, thus—

	Rs.
Net divisible income (five times the income of 40 acres) ...	1,175
Rent at 20·4 per cent.	240
Expenses—	
Diet	19
Clothing	10
Miscellaneous	10
Revenue	200
Total	239

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Size of proprietary holdings.

In the Thal *nahri* circle the figúres will be these, if the landlord cultivates his own land :—

	Acres.	Value. Rs.	
Total cropped area ...	15	...	
Wheat ...	7	95	
Indigo ...	2½	44	
Other crops ...	5½	44	
Total ...		183	
	Per cent.		
Deduct fodder ...	8·8		40
Menials' dues ...	13·		
Total ...	21·8		
Net income ...			143

Expenses, food—	Sérs.	Rs.	
Grain at 2 sérs per day ...	730	...	27
Wheat ...	365	15	
Other grain ...	365	12	
Clothing ...			15
Miscellaneous ...			15
Replacing of bullocks ...			10
One servant at—			
8 annas a month ...		6	23
36 sérs of grain a month ...		...	
Wheat ...	216	9	
Other grain ...	216	7	
Harvest fee ...		1	
Seed at Re. 1-8-0 per acre ...			23
Fees for manure (*ahli*) ...			5
Blanket ...			1
Land revenue and cesses at Re. 1-8-0 per acre ...			22
Total...			141

An allowance of two sérs a day for food has been made in this circle as the supply of wild fruit is not so plentiful here as in the *cháhi* Thal. Half the food grain has been taken to be wheat. A fair provision has been made for clothing as this circle is nearer the towns. The miscellaneous expenses have also been fixed at Rs. 15, as the calls on the *zamíndár's* purse on account of guests, priests and ceremonies are larger in this circle than in the Thal proper, which is so inaccessible. Only Rs. 10 have been allowed for replacing bullocks, as only two yokes will be needed. If, however, the landlord does not cultivate the land, the accounts will stand as below :—

	Acres	Rs.
Total cropped area ...	45	...
Net income (three times the income of 15 acres) ...		429
Rent at 29·2 per cent. ...		125
Expenses—		
Food ...		27
Clothing ...		15
Miscellaneous ...		15
Revenue and cesses at Re. 1-8-0 per acre ...		68
Total ...		125

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Thus in the Thal *nahri*, a *zamíndár* needs a cropped area of 15 acres if he himself works on land, and of 45 acres if he works through tenants, simply to enable him to live without contracting debts. In the Pakka circle, 13 acres of crops are needed for a cultivating proprietor to be able to make a living and pay his land revenue, thus :—

	Acres.	Value. Rs.
Wheat	5½	88
Rice	1	16
Indigo	1	19
Cotton	1	16
Barley	¾	9
Other crops	3¾	30
... ...	13	178
	Per cent.	
Deduct fodder	10·2	...
Menials' dues	12·9	...
Total ...	23·1	41
Net income ...	...	137

Expenses—

	Rs.
Food (as in Thal Nahri)	27
Clothing	15
Miscellaneous	15
One servant (as in Thal Nahri)	23
Blanket	1
Cost of replacing bullocks	15
Seed	19
Revenue and cesses at Re. 1-10-0 per acre	22
Total	137

The same reduced diet has been allowed here as in the Thal *nahri* circle, for although there are few *jal* (*Salvadora oleoides*) trees here and so *pilhús* are not available as in the Thal, yet *ber* trees are scattered all over the circle, and dates form a substantial part of the food for a month or so. There are no date trees in the Thal. The cost of replacing bullocks has been increased here, as there is not so much grazing land, and it is not possible to keep surplus cattle for breeding purposes. So whenever bullocks are to be replaced, they have generally to be purchased in the market. Nevertheless, the allowance of Rs. 15 per annum is rather small, even taking it that one bullock will be needed every second year. If the landlord gives the land to tenants, he cannot live on less than 37 acres as is shown below :—

	Rs.
Net divisible income for 37 acres	390
Rent at 29·9 per cent.	117

Expenses—

	Rs.
Food	27
Clothing	15
Miscellaneous	15
Land revenue at Re. 1-10-0 per acre	60
Total	117

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Size of proprietary holdings.

Figures for the Bet have been worked as follows. If the owner himself cultivates his land, the cropped area needed is 18 acres:—

	Acres.	Value. Rs.
Wheat	11	123
Barley	2	18
Gram	2	16
Other crops	3	24
Total ...	18	181

Deduct—

	Per cent.	
Fodder	7·6	...
Menials' dues	14·6	...
Total ...	22·2	40
Balance ...	...	141

Expenses—

	Sérs.	Rs.	
Food at	$2\frac{1}{2}$ a day	...	
Wheat	456	18	
Other grain	456	15	33
Total	912	33	

Clothing	15
Miscellaneous	15
One servant (as in Pakka)	23
Blanket	1
Replacing bullocks	15
Seed at Re. 1 per acre...	18
Revenue and cesses at Re. 1-8-0 per acre	20
Total	140

In case of cultivation by tenants, 40 acres of cropped area will be needed, thus:—

	Rs.
Net divisible income of 40 acres	313
Rent at 34·7 per cent.	108
Expenses—	
Food	33
Clothing	15
Miscellaneous	15
Revenue and cesses	45
Total	108

In this circle, the full quantity of food required has been allowed, as there are no *ber*, date or other wild fruit trees to speak of.

Looking now at the classification of holdings given in the preceding table, it will be seen that 97·6 per cent. of landowners in the Thal circle, 87·8 per cent. in the Thal *nahri*, 86·8 per cent. in the Pakka, and 78·6 per cent. in the Bet circle possess less than 10 acres each of cultivated lands. It has been shown above that the minimum cropped area on which a man can exist in any of the circles is 13 acres. It is, therefore, clear that to the extent of the above percentages, the *zamíndár* cannot live on agriculture

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alone in years of average conditions. In the Thal circle, there is but one landlord who exceeds the limit of 40 acres on which it is possible to defray the most necessary expenses without running into debt, if the landlord himself cultivates the land. But there is not a single person in the Thal circle who owns more than 200 acres of cultivated land. In other words, it is a practical impossibility for any of the landowners in the Thal to be able to live on agriculture alone, if he works through tenants. This is the main reason why in this circle there is more *khudkásht* than in any other circle. The area cultivated by owners is 65·5 per cent. and that by tenants paying land revenue with or without a nominal cash rent 23 per cent.; only 11 per cent. of the land is under tenants paying rent in kind. In the Thal *nahri* circle, a man requires a minimum of 15 acres for *khudkásht* and 45 acres for cultivation through tenants, and 93 per cent. of the landlords own less than 15 acres each. Thus there are only 7 per cent. of them who can make a living by *khudkásht*, and less than 1 per cent. of them can live on rent. In the Pakka circle again the least a man can live on is 13 and 37 acres of crops, respectively, for *khudkásht* and cultivation through tenants. In this circle 86·8 per cent. men own less than 10 acres each, and the average size of a holding in class IV is 12·9 acres. The 5·4 per cent. of owners included in this class also fall short of the minimum. This leaves only some 8 per cent. landlords who can live on *khudkásht*; of these 2 per cent. being able to live on rents. In the Bet circle 87·4 landowners possess less than the required minimum of 18 acres for *khudkásht*, and only 6·7 per cent. men exceed the limit of 40 acres when it becomes possible to work through tenants. Looking at the figures of the whole *tahsil*, 87·4 per cent. men are such as cannot possibly make both ends meet in any assessment circle, and 4·8 per cent. falling under class IV may also be added, as their average possession of 12·9 acres is below the minimum of 13 acres. The balance is some 8 per cent. men who can live mostly on *khudkásht* and partly on rent. As regards the size of holdings falling under each class, there are 7·5 per cent. owners in the *tahsil* (the percentage is 23·5 in the Thal circle) who own no cultivated land or whose cultivated land measures less than half an acre. The average possession of the men falling under class II, 67·7 per cent. in the whole *tahsil*, is 1·9 acre, and that in class III, which includes 12·2 per cent. of landlords, 7·5 acres. It is thus clear that in the Thal circle particularly and in the other circles generally a great majority of the landlords have to live on very small holdings as compared with the minimum areas required by calculation. It may then be asked how it is possible for most of the landlords to exist. The answer is that in the Thal, and in the other circles too, the *zamíndár* does not live on his crops alone. He almost always keeps some cattle which help him materially in his finances. For instance, flocks of sheep and goats in the Thal not only assist agriculture by providing manure, but the landlord usually sells a few of his flock to pay his land revenue when he has not enough grain. Then the calculations made above are based upon yields adopted for average years. In years of good rainfall and unusually favourable conditions, the produce is plentiful and cattle multiply. Then even in small holdings the *zamíndár* gets enough for his own maintenance and the payment of land revenue, and is besides able to repay some of his debts. It is to these exceptional years that the *zamíndár* looks forward for making up his deficit. Thirdly, in the struggle for existence, the poorer *zamíndárs* have sometimes to live even on smaller allowances than those made in the above calculations. They have to work as labourers when they can get work within small distance of their homes, and very often a poor landlord takes some land belonging to his neighbours, on cultivation as a tenant, in order to supplement his income. It is,

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however, clear that the majority of landowners have to work at a very small margin of profit, indeed most of them have no margin at all, and so the smallest aberrations in the way of cattle disease, continued drought or the like throw them out of balance, and they are obliged to resort to the village money-lender for debt; and once they fall into his hand, there is no getting out of it."

Section D.—Miscellaneous Revenue.

The total consumption of excisable articles is as follows:—

Spirits in gallons.

Years.	Foreign.	Country.
1905-06	136	1,448
1906-07	65	1,351

Opium in Sers.

1905-06	469
1906-07	494

Drugs in Sers.

Years.	Bhang	Charas.
1905-06	6,471	312
1906-07	4,839	258

The gross receipts and expenditure during the years 1905-06 and 1906-07 were—

Years.	Receipts.	Expenditure.
1905-06	14,408	1,329
1906-07	16,556	1,071

The incidence of the gross receipts from excisable articles on each 1,000 of the population in rupees has during the same two years been —

Years.	Liquor.	Opium.	Drugs.
1905-06	6·3	21·5	7·8
1906-07	7·5	24·7	8·6

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Miscellaneous Revenue.

The incidence of net excise revenue from all sources per 1,000 of total population in rupees is given below:—

1905-1906	32·2
1906-1907	38·2

There are no distilleries in this District. Liquor is generally obtained from the Amritsar and Rawalpindi distilleries and sometimes from Shahjehánpur and Sujánpur. Long ago there were two distilleries in this district, *i. e.*, one at Muzaffargarh and the other at Alípur. They were closed on 3rd February 1894 and 1st April 1891 respectively.

The number of shops is as follows:—

(1) In the Muzaffargarh Tahsil there are 9 shops, *viz.*:—

1. Muzaffargarh town, Mandigate.
2. Muzaffargarh town, Choukbazar.
3. Khangarh.
4. Kinjhar.
5. Rangpur.
6. Alipur.
7. Mochiwáli.
8. Mahara Khas.
9. Basira.

(2) In the Alípur Tahsil there are 7 shops, *viz.*:—

1. Alípur town.
2. Khairpur.
3. Sitpur.
4. Jatoi.
5. Shahr Sultán.
6. Sultánpur.
7. Jhuggiwála.

(3) In the Sanáwán Tahsil there are 7 shops, *viz.*:—

1. Sanáwán.
2. Gurmani.
3. Kot Addu.
4. Mahmúd Kot.
5. Khohawar.
6. Daira Dín Panah.
7. Gházi Ghát.

Imported liquor.

There are only two shops for the sale of imported liquors (spirits, wines and beer) in this district, that is, one at Muzaffargarh and the other at Alípur. In addition to these one more license on fixed fees is given for the sale of these liquors at the Mahmúd Kot Railway Refreshment Room (*Sanáwán Tahsil*).

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Miscellaneous Revenue.

Opium.

Poppy cultivation has not been allowed in this district since 1897. Opium is generally imported from the Dera Gházi Khán and Amritsar Districts. Excise opium imported from Bengal is also kept in the Government treasury for sale to license-holders. Sometimes opium is smuggled from Rájanpur (Dera Gházi Khán District) across the Indus to the Alípur *tahsil*.

Drugs.

Cultivation of hemp plant is prohibited in this district except at religious institutions under special licenses. Bhang is generally imported from the Amritsar and Hoshiárpur Districts, and a small quantity is also imported from the Dera Gházi Khán District.

Charas.—Is obtained from the official warehouses at Hoshiárpur and Amritsar to which places it is imported from beyond the border.

Stamps.

The income from sale of court-fee and non-judicial stamps, the expenditure on the agency employed for the sale of stamps and the net income are given below :—

Years.	Receipts.	Expenditure.	Net receipts.
	Rs.	Rs.	Rs.
1905-06	76,809	2,468	74,341
1906-07	70,365	2,099	68,266

The incidence of the gross revenue from stamps *per mille* of population was Rs. 173 in 1906-07.

Income-tax.

Incomes under Rs. 1,000 are exempt from the payment of income-tax. The number of assessees, including Government servants, the amount of the tax and the incidence on total population are noted below :—

Years.	Number of assessees.	Net collection.	Incidence per head of population.
		Rs.	
1905-06	253	6,965	·017
1906-07	286	7,533	·018

The figures will show that the district does not contain many large traders or flourishing manufactories or other concerns.

Section E.—Local and Municipal Government.

CHAP. III, E.

Local and Municipal Government

Municipal Committees.

There are at present only four municipalities in the district, *viz.* :—

(1) Muzaffargarh.
(2) Khangarh.
(3) Alipur.
(4) Khairpur.[1]

They were constituted in April 1883. The following municipalities which were created at the same time were abolished on 25th May 1886 :—

Kinjhar, Shahr Sultán, Sitpur, Jatoi, Kot Addu and Daira Dín Panah.

The following statement shows the relative strength of *ex-officio*, nominated and elected members, according to the figures of 1906-07 :—

Name of municipalities.	*Ex-officio.*	Nominated.	Elected.	Total.
Muzaffargarh... ...	3	...	6	9
Khangarh	...	3	6	9
Alipur	3	6	...	9
Khairpur	2	6	...	8

Every elected member vacates his seat after three years. Members are elected in April to fill up vacancies so created.

The poverty of the municipalities does not permit any considerable improvements in the drainage of the towns, nor has it been found possible or necessary to undertake any scheme for the supply of water or beautification of the towns. The octroi is the main source of income of the municipalities. The incidence of taxation on town population was in 1906-07 as follows :—

Municipal towns—	*Incidence per head.*
Muzaffargarh	1 8 10
Khangarh	1 4 6
Alipur	1 14 1
Khairpur	1 6 5

District Board

The District Board was constituted under Act XX of 1883. It is comprised of 30 members, 10 of whom are official, and 20 non-official. The Deputy Commissioner is the President.

(1) Since abolished.

CHAP. III, E

Local and Municipal Government

District Board.

Local Boards exist in the 3 *tahsils* of Muzaffargarh, Alípur and Sanáwán, and consist of 20, 6 and 5 members respectively. These Boards help towards giving intimation of the general requirements in their respective *tahsils*, and in seeing work carried out expeditiously and satisfactorily. The Tahsildar is in each case *ex-officio* President of the Local Board.

The income of the District Board for 1907-08 amounted to Rs. 91,896-14-11, the principal source being the local rate. The expenditure for the corresponding period amounted to Rs. 1,01,943-8-9. Details are shown in the following tables :—

Income.

	Rs.	a.	p.
Local rate	60,341	2	9
Cattle-pounds, stray cattle, etc. ...	584	5	6
Education, tuition fees, etc.	602	14	6
Medical, sale of empty cases, etc. ...	392	8	3
Scientific and other Minor Departments	1,567	1	3
Miscellaneous	45	12	2
Civil works	16,354	4	11
Contribution from Government ...	12,008	13	7
Total ...	91,896	14	11

Expenditure.

	Rs.	a.	p.
General Establishment	3,867	12	2
Cattle-pounds, Establishment	343	15	0
Education	24,420	8	5
Medical	11,285	8	5
Scientific and other Minor Departments	7,211	0	1
Superannuation allowance	75	0	0
Miscellaneous	3,097	5	7
Civil works	49,644	7	1
Contribution towards Vaccination Establishment and High School.	1,998	0	0
Total ...	1,01,943	8	9

There are in the district 22 miles of metalled and 545 miles of unmetalled roads. The maintenance of 15 miles of the former and all the latter is chargeable to District Board Funds. The Multan-Dera Gházi Khán road, which runs through the district and only portions of which are metalled, is maintained by the Public Works Department.

Most of the public buildings in the district are the property of the District Board and are maintained by it. Most of the Public Works Department buildings are under the control of the District Board, and are repaired by the Public Works staff of the Board. Several new buildings have been recently constructed by the District Board, chief among these being the Lying in Wards in connection with the Board's hospital at Sanáwán, and veterinary stables with dispensaries at Muzaffargarh and Kot Addu.

The establishment consists of a District Engineer, one Overseer and 3 Mistries. All construction works in connection with the town municipalities of Khangarh and Alípur are also executed by the Public Works staff.

Section F.—Public Works.

Railways.

The Sind Sagar Railway line which crosses the district was constructed in 1886. The Engineering Department of the Railway has a Sub-Inspector of works stationed at Muzaffargarh.

Roads.

The road from Multan to Dera Gházi Khan (Bengal Route book No. 479) passes through Muzaffargarh, Kureshi and Gházi Ghát and is in charge of the Executive Engineer, Provincial Division, Multan.

Government buildings.

The principal Government buildings are the District Katchery, the Police Lines, the Canal Executive Engineer's residence and office, the Deputy Commissioner's residence, the Superintendent of Police's residence, the Sessions House, the Tahsil, the Munsiff's Court, the Hospital, the Dâk Bungalow and the School at Muzaffargarh and the Tahsil buildings at the head-quarters of other *tahsils*, the Thanas, the rest-houses, the outlying hospitals and the Munsiff's Court at Alípur.

Irrigation.

The district constitutes a division of the Irrigation Branch of the Public Works Department. An Executive Engineer is stationed at Muzaffargarh and looks after the inundation canals of the district with the assistance of three Sub-Divisional Officers and a Deputy Collector.

Section G.—Army.

There is no cantonment in the district.

Section H.—Police and Jail.

The Muzaffargarh district is for police purposes situated in the Western Range which has its head-quarters at Ráwalpindi.

Strength of Force.

Subject to the general supervision of the District Magistrate the police force is under the control of a Superintendent of Police and consists of—

- 1 Inspector.
- 20 Sub-Inspectors.
- 56 Head-constables.
- 5 Mounted Constables.
- 341 Constables.

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Police and Jail.

But when the proposals of the Police Commission are fully carried out, the number of Inspectors will be increased by four and that of Head-constables reduced by 4.

Recruitment.

Recruits are enlisted under departmental rules between the ages of 20 and 25 years if they have a chest measurement of 33 inches and are not less than 5 feet 7 inches in height, except in the case of men who have served in the Regular Army and who have left it otherwise than in consequence of misconduct, or in case of certain castes such as Dogras. No great difficulty is experienced in recruiting, although most of the men who come up for enlistment belong to other districts, chiefly Miánwáli and Jhelum, as the following figures will show :—

Muzaffargarh District.

1904	14
1905	17
1906	17

Other Districts.

1904	24
1905	25
1906	27

Training.

When enrolled, a recruit is put through a course of training in drill and police working. This course usually lasts about 6 months. After a recruit has been passed he is usually posted to a standing guard or road-post and eventually after 2 or 3 years' service he is drafted out to a police station. Once during the year each constable posted to a police station is called into head-quarters for a month's training. At the end of the month he is examined. If he passes his examination he is sent back to his police station, otherwise he is transferred to lines or is made to attend the School for another month. His subsequent promotion in the grade of constables depends on the length of his service and character, whilst his promotions to the grade of Head-constable depends on his character and ability. Should he be educated and considered fit for promotion to the rank of Head-constable, he is sent to the Police Training School at Phillour for 6 months. If successful at the examination held at the end of this period, he can be promoted up to the rank of first grade Head-constable. His next step in promotion, *viz.*, to the rank of Sub-Inspector depends on his detective abilities, social status and character, and if he is considered fit for further promotion he is again sent to the Phillour Training School where he undergoes a 4 or 6 months' course of training and is again examined. Should he pass, he becomes eligible for promotion to the rank of Sub-Inspector, provided that his character, etc., remain satisfactory.

Uneducated constables very rarely rise beyond the rank of Head-constable, and except when they show detective abilities are usually employed on standing guards.

CHAP. III, H. Police and Jail. Divisions.

For administrative purposes the district is under the new scheme divided into Inspector's circles and police stations (Thanas). An Inspector's circle usually consists of from 4 to 6 police stations. There are 3 Inspector's circles and 14 police station jurisdictions in this district. These are as follows :—

I.—Muzaffargarh Circle.

Police Stations—

(1) Muzaffargarh.
(2) Khángarh.
(3) Rohillánwáli.
(4) Kinjhar.
(5) Kureshi.

II.—Alípur Circle.

Police Stations—

(1) Alípur.
(2) Sitpur.
(3) Khánwah.
(4) Jatoi.
(5) Shahr Sultán.

III.—Kot Addu Circle.

Police Stations—

(1) Mahmúd Kot.
(2) Sanáwán.
(3) Daira Dín Panah.
(4) Rangpur.

In addition to the 14 police stations there is a second-class outpost consisting of 1 Head-constable and 4 foot constables at Munda which is in the Daira Dín Panah police station jurisdiction and second class road-posts consisting of 3 foot constables at Kot Addu, Langar Sarai and Samti which are in the station jurisdictions of Daira Dín Panah, Muzaffargarh and Rangpur, respectively.

There is, however, a proposal to convert the Munda out-post into a separate police station.

Rural police.

The Rural Police is subject to the rules laid down by the Government under the Punjab Laws Act (Act IV of 1872). The appointment, dismissal, etc., of its members (*chowkidárs*) is vested in the District Magistrate. The *chowkidárs* number 457, and it is their duty to co-operate with the regular police in the prevention and detection of crime, the reporting of vital statistics and the presence of undesirable persons and strangers, etc., etc.

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Railway Police.

The Railway Police is under the control of the Superintendent of Railway Police, Lahore. Its duty is to prevent and detect crime within the Railway fencing, and for this purpose there is a Railway police station at Muzaffargarh with 1 Sub-Inspector and 4 foot constables. In addition to this force, two constables are posted at each of the Mahmúd Kot and Gházi Ghát Railway Stations.

Reserves.

The district has 3 reserves which are designated the first reserve, the second reserve and the third reserve. These reserves are governed by the rules laid down in the Police Department. The first reserve is always held available for duty at a moment's notice. It consists of 1 Sub-Inspector, 2 Head-constables and 25 foot constables and is mobilized under the orders of the Deputy Inspector General of Police.

The second reserve consists of 5 per cent. of the sanctioned strength of the district and is mobilized under the orders of the Inspector General of Police, Punjab.

The third reserve consists of 1 Sub-Inspector, 4 Head-constables and 43 foot constables, and is only mobilized in cases of urgent necessity and under the orders of Government.

Special Punitive and Military Police.

There is no Punitive Police Post in the district nor is there any Military Police.

Detection of crime.

The Inspector and Sub-Inspectors are the agency for the detection of crime in their respective charges. Each Sub-Inspector is assisted by 2 Head-constables who have usually undergone a course of training at the Training School, and 10 constables. Should the station jurisdiction return more than 100 cases per annum, as is the case with Muzaffargarh police station, a junior Sub-Inspector with 2 additional foot constables is deputed to assist the Sub-Inspector in charge. Subject to the control and supervision of the Circle Inspector and Superintendent of Police the Sub-Inspector is responsible for the detection and prevention of crime within his jurisdiction, and he is expected to personally look into each case and leave as little of the investigating work to his subordinates as he possibly can. The Inspector usually attends the investigation of all important cases and the Superintendent also takes part in the working up of serious cases. The Sub-Inspector is assisted by the zaildár, lambardár and village *chowkidár* or rural police officer, and owing to the lack of telegraphic communication, etc., these agencies are the chief means of transmitting information regarding the perpetration of crime and the whereabouts of criminals.

Finger print system.

The finger print system is in vogue in the district. Persons arrested whose antecedents are unknown to the police have their finger impressions taken on Search Slips which are sent to the Bureau at Phillour, and in certain cases also, the Central Bureau of Simla with a view to ascertaining the previous convictions, if any.

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Finger print system.

In case of identification the previous history of the person is communicated to the local police. Finger prints of persons whose real name and antecedents are unknown to the police or persons who are known or believed to commit offences outside the limits of their districts or who are known or suspected to be members of registered criminal tribes, etc., etc., are on their conviction taken on P. R. (Police Registered) slips, those of the more dangerous criminal being marked $\frac{\text{P.R.}}{\text{T.}}$ (which signifies that the individual in questionis to be released from the jail nearest to his home). These finger print slips are usually prepared in duplicate. One copy is sent to the Phillour Bureau and the other is attached to the warrant of commitment to jail, when the convict is released, this copy is returned by way of release notice to the Superintendent of Police and is filed in his office. In case the convict is not sent to jail, the slip is at once filed in the office of the Superintendent of Police, or should the convict be a resident of another district, it is sent to the Superintendent of Police of the district concerned. In certain cases a third copy is also prepared and sent to the Central Bureau, Simla. These slips are prepared in the presence of the Magistrate trying the case, the Superintendent of Police, or the Superintendent of Jail. The Finger Print Department of the district is under the control of the Court Inspector always subject of course to the orders and supervision of the Superintendent of Police, whose duty is also to decide whether a convicted person should or should not have his finger print taken, and in the former case whether he should be classed P. R. or P. R. T. The Court Inspector is assisted by a staff of trained Head-constables and foot constables. In cases of necessity expert advice can also be obtained from the Phillour Bureau which also annually sends one of its officers to inspect the finger print working of the district.

Crime.

The predominant feature of the crime of the district is cattle lifting, the extensive river front on three sides of the district affording an excellent means of concealing and disposing of stolen cattle. Cattle-lifting is looked upon by young bloods among the ordinary agriculturists more as a pastime than as an offence. Indeed several men of position and influence do not mind patronizing the game for the sake of fun as well as of profit. Cattle are often taken across the Indus to Rájanpur or across the Chenab to the Baháwalpur territory. The thieving fraternity have lately established communication with the Chenab Colony, and cattle once driven up there are often as difficult to trace as they used to be when that tract was an extensive jungle called the Bár. Offences accompanied by violence are not common. Murders are almost always the outcome of jealousy over or intrigue with a woman. Cases of enticing away a woman are very common and instances of kidnapping and rape are not rare. Burglary which is confined generally to towns or large villages is the only other class of crime

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Police and Jail.

Crime.

prevalent in the district. The number of cases reported and admitted within the past five years and the number of cattle theft cases and burglaries reported and admitted within the same period are—

Total cases.

Years.	Reported.	Admitted.
1902	1,160	1,042
1903	1,151	1,068
1904	1,148	1,000
1905	1,340	1,095
1906	1,059	858
Cattle-theft.		
1902	178	163
1903	166	154
1904	131	119
1905	188	157
1906	136	113
Burglaries.		
1902	251	243
1903	267	255
1904	227	206
1905	351	332
1906	299	255

Criminal Tribes.

There are no members of Registered Criminal Tribes in this district but such tribes as the Mashanis of Hinjrai (police station Daira Dín Panah), the Mirjhanas of Saidpur (police station Rangpur). The Ghazlanis of Kesar Ghazlani (police station Jatoi), the Gopangs of Bet Isa (police station Khánwah) and the Suranis of Ghulám Haider Surani, Fateh Surani, etc., (police station Kureshi) may be regarded more or less as criminal tribes.

Jails.

There is no jail in this district. There is, however, a judicial lock-up at Muzaffargarh in which under-trial prisoners and persons convicted and sentenced to very short terms of imprisonment are incarcerated.

Reformatories.

There is no reformatory in this district.

Section I.—Education and Literacy.

CHAP. III, I.
Education and Literacy.

Table XIII of Part B shows that of the total male population of 220,207 in the district only 14,279 or nearly 6·5 per cent. are literate, while the number of literate females in the district is 377 or 2 per cent. of the female population. Comparing with the census figures of 1881 and 1891 it appears that a slow but a steady progress is being made in the matter of learning to read and write. The percentages according to each census are these—

Years.	Males.	Females.
1881	5·7	·09
1891	6·4	·08
1901	6·5	·02

This district is very backward in education and the fact of the greater part of the male population residing at detached hamlets scattered all over the district greatly retards progress in imparting education to them. Leaving alone the insignificant population of Europeans and Eurasians who are all educated, the Hindus have the largest population of literates. This is only natural as the Hindu population consists mostly of Kirárs (shop-keepers) who are literate by profession. The only indigenous systems of education prevailing in the district which deserve notice are the reading of the Korán by Musalmán boys and that of multiplication tables by Kirár youngsters. A Sanskrit-reading class has been established at Muzaffargarh by some Brahmans. There are practically no Páthshálas in the district. Here and there a learned Pandit gathers a few scholars round him for tuition. There are no regular schools in the *dharamsálas* either although it is not uncommon for some Sikhs and Hindús to send their boys to the *fakír* presiding at the *dharamsála* for education. The system of sending boys for education to the mosque is general among the Musalmáns, and every one who can afford to pay the *mullán* a trifle sends his boy to read the Korán even though it be for a short time. In many small hamlets, however, there is no *mullán*, and the boys are deprived of the chance unless they travel long distances. A small quantity of *gur* (consolidated sugarcane juice) has to be given to the *mullán* when a boy begins reading, and he gets his food once a week while the boy reads with him. This fee is supplemented by some cash payment, usually a rupee, when the boy finishes each Sepárah (chapter) of the Korán.

There are very few cases in which boys read Arabic or Persian with the *mullán* after finishing their Korán. The Kirár boys go to the *ojha* (teacher) who after teaching them the Kirrákki (Hindi) alphabet coaches them up in multiplication

CHAP. III. I.

Education and Literacy.

tables which form the principal portion of the arithmetic and the main part of their education. Most of the teaching is by rote.

The system adopted by the *mullâns* is to teach the boy a line or two and make him repeat the same all the time he is at school. Next morning he asks the boy to repeat the previous day's lesson and teaches him another line or two. The process is repeated every day, but the scholar has to recite from memory every morning the whole of what he has learnt up to date. This is the usual method for training the memory also adopted by the Pandits teaching Sanskrit. The *ojhas* follow the same system too, but their multiplication tables (*pahâre*) are rhythmic compositions which are sung something like songs. The boys get them up separately and then sing them a loud in a chorus. The effect on the memory of the boys is wonderful. The Musalmán boys are required to read the Korán by way of religious instruction, but it is very seldom that they are taught the meanings of what they read. The Hindu boys receive practically no religious education. The agriculturists' children usually receive no education, except those that can attend the aided or *zamíndári* schools. Musalmán girls usually read the Koran at home or with the *mullán* or his wife. The Hindu girls also learn some reading and writing in Hindi and occasionally read a religious book also. What girls generally learn at home is sewing and other needle-work. A few girls attend the Board (girls) schools at Muzaffargarh and Kot Addu.

Scripts employed.

The Kirárs write in Kirrákki (Hindi), a character which is most imperfect and difficult to decipher. Indeed the writings of the Kirárs of one part of the district can seldom be read by those of another part. The letters are put together without any vowel signs and one group of letters can be interpreted in half a dozen different ways. It is a common criticism of the Kirrákki character that it makes no difference between Dil=clod and Dôlá=an earthen pot, both words being spelt thus D, l. Another interesting example is of the letters W and T, which put together may mean wat (twist), wata (change), watta (stone), wattu (a Jat tribe), wito (to spill), and so on. There are funny instances of the way in which the same script may convey a double meaning: "Lálaji Ajmer gae" (máster has gone to Ajmere) written in Kirrákki may most naturally be read as 'Lálaji aj mar gae' (master has died to-day). Cases in which clever interpretations are put on Kirrákki writings in courts, with a view to give them meanings favourable to one party or the other are very amusing.

Excepting the Kirárs, the script employed generally throughout the district is Urdu. The local dialect called 'Jatki' or 'Multani' is also written in the Urdu (Persian) character. A few Hindus can write in the Nágri character and Sikhs in Gurmukhi.

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Education and Literacy.

University and Educational System. Schools.

Excepting the Government High School at the head-quarters of the district and four Primary Schools maintained by municipalities, all the schools in the district are maintained by the District Board, which is required under the rules to spend 25 per cent. of its gross annual income on education in addition to education fees and grants from Government and municipalities. There are two kinds of schools in the district, Primary and Secondary. Primary schools are again of three classes. Town Primary, Village Primary or Rural and Zamíndári. Rural and Zamíndári schools are established in purely rural tracts and suit the rural population very well. The difference between the Town Primary and the Rural schools lies only in the subjects taught; Urdu, Persian, geography, arithmetic, mensuration, writing and object-lessons are taught in the former, while Persian is omitted in the latter and the other subjects are taught on a smaller scale but with the addition of fractional tables, the native method of accounts and practical agriculture. Besides these there are many aided and unaided indigenous schools in the district. The Industrial School at Muzaffargarh is a Primary school in which carpentry is taught along with other subjects. There are three Secondary schools, a Vernacular Middle at Kot Addu, an Anglo-Vernacular Middle at Alípur, and a Government High School at Muzaffargarh.

Supply of teachers.

The Vernacular Middle School at Kot Addu provides vernacular teachers for Primary schools in the district. Seven vernacular Middle passed boys are sent every year to the Normal School at Multan to qualify for the posts of teachers in the Primary schools. In the Normal School they get a stipend of Rs. 8 a month and can after two years' training obtain the Junior Vernacular certificate and can be appointed permanent teachers in the Primary schools. Junior Vernacular passed candidates can undergo a further course of two years' training in the Central Training College, Lahore, and qualify themselves for the Head Mastership of a Vernacular school by passing the Senior Vernacular Certificate examination, but there is no great demand for the services of such men in the district.

Higher education.

The Anglo-Vernacular Middle School at Alípur and the Government High School at Muzaffargarh prepare boys for higher University examination.

Inspection and examinations.

All the Secondary schools are inspected twice a year, by the Inspector. The winter inspection is called the annual inspection and class promotions are given after that. The Government High School, Muzaffargarh, sends up boys for the University Entrance Examination. The Primary schools are inspected once a year by the Assistant Inspector in the months of October and November. All the Board, Middle and Primary, Zamíndári, Aided or Unaided Indigenous schools are inspected by the District

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Education and Literacy.

Inspector. Besides the Departmental Inspectors, the Deputy Commissioner, Extra Assistant Commissioners, Revenue Officers and Tahsildars inspect the Board schools in the course of their tours in the district. The Secondary schools are under the control of the Inspector, while the Primary schools are managed by the District Board.

Fees.

Education up to 3rd Lower Primary class is given free in the district, while nominal fees of 1 anna and 1 anna 3 pies are charged from non-agricultural boys reading in IV and V Primary classes respectively. Fees of annas 3, annas 3-6 and annas 4 are charged from non-agriculturists in VI, VII and VIII classes respectively of the Vernacular Middle School at Kot Addu, while these rates are reduced to one-half in the case of agriculturists. In the Anglo-Vernacular Middle School at Alípur three-fourths of the fees prescribed by the Educational Code are charged.

Scholarships.

Details of scholarships are given below :--

First Middle School Scholarships.

Kind of scholarship.	Number of scholarships.	Amount.	Source from which paid.
		Rs.	
Open	4	2	District Board.
Close	6	2	Ditto.
Jubilee	3	2	Ditto.
Close	4	2	Kaure Khan's estate.

High School Scholarships.

Kind of scholarship.	Number of scholarships.	Amount.	Source from which paid.
Prize	1	6	District Board.
Open	2	4	Ditto.
Close	3	4	Kaure Khan's estate.
Medical College	1	4	District Board.
Art School	Every alternate year.	7	Ditto.

All these scholarships excepting those for Medical College and Art School are awarded by the Inspector on the results of examinations held by him.

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Education and Literacy.

Scholarships.

The schools in the district are classified as follows:—

Kind of school.	*Number.*
High School (Muzaffargarh)	1
Anglo-Vernacular Middle School (Alípur)	1
Vernacular Middle School (Kot Addu)	1
Town Primary Schools for Boys	43
Village Primary Schools for boys	6
Zamíndári Schools	3
Girls' Primary Schools	14
Aided Zamíndári Schools	6
Aided Indigenous Schools	8
Industrial School (Muzaffargarh)	1
Aided Girls' School	1
Total	85

The number of scholars receiving tuition in the district on 30th September 1906 is given below:—

	High school.	Other schools.	Total.
Brahman Hindus	20	71	91
Non-Brahman Hindus	170	1,178	1,348
Sikhs	14	19	33
Muhammadans	117	1,437	1,554
Others	3	11	14
Total ...	324	2,716	3,040
Agriculturists	89	1,033	1,122
Kamin	...	301	301
Non-agriculturists	235	1,382	1,617
Total ...	324	2,716	3,040

Notwithstanding the infinitely small proportion of their total population, the Hindus supply about as many scholars as the Musalmáns, and the agriculturists attending school represent only 37 per cent. of the total number on the rolls.

There are no schools or special classes for aboriginal or depressed tribes and castes in the district.

CHAP. III, I. — Education and Literacy. Female Education. Girl Schools.

There are 14 District Board Primary schools for girls and one Aided girls' school in the district. Of the 15 girls' schools 9 are Urdu schools for Muhammadans and the remaining 6 are Nágri schools for Hindu girls. The Urdu schools are at Muzaffargarh, Murádabád, Rangpur and Khangarh in the Muzaffargarh *tahsil*, at Kot Addu and Daira Dín Panah in the Sanáwán *tahsil*, and at Jatoi, Sitpur, and Alípur in the Alípur *tahsil*.

The Nágri girls' schools are at Muzaffargarh, Rangpur and Basira in the Muzaffargarh *tahsil*, at Gujrát, Kot Addu and Daira Dín Panah in the Sanáwán *tahsil*.

Reading, writing, arithmetic, geography and needle-work, and other works such as knitting socks, preparation of handkerchiefs, are taught in the schools. Female education is not very popular yet, the idea being that educated girls lose their heads and become unfit for household duties. Another difficulty generally experienced in the opening of girls' schools is the paucity of female teachers. The monthly cost of maintaining the girls' schools is about Rs. 388 which is met from Municipal and District funds.

Important Schools.

The more notable schools in the district are the Government High School and the Industrial School at Muzaffargarh, and the Anglo-Vernacular Middle School at Alípur and the Vernacular Middle School at Kot Addu.

Govt. High School at Muzaffargarh.

The High School at the head-quarters of the district is intended for those who wish to qualify for University examination. Some 325 boys attend the school, less than one-third of them being Musalmáns. As is natural the boys come mostly from non-agricultural classes, but as many as 89 agriculturists also attend the school. The boys are taught up to the Entrance standard. In 1906, 23 boys went up for the University examination and 13 passed. Ordinarily success at the Entrance examination is considered the goal, and the boys begin to look out for Government service. A few, however, join some college for prosecuting further University education.

The school buildings do not provide sufficient accommodation for the increasing need of the institution. A small boarding-house is attached to the school with some 29 resident boarders. Much more room is, however, needed. Even in the matter of library, books and appliances the school is somewhat poorly provided.

Industrial School at Muzaffargarh.

An Industrial School was opened at Muzaffargarh in May 1905. Carpentry is taught here along with the subjects which form the scheme of studies for Primary schools. There are 41 boys on the rolls. The school has a carpenter master who is paid Rs. 30 a month, and an ordinary teacher on Rs. 10 a month for teaching the school subjects. The school has a boarding-house attached to it. The number of boarders is 17, and the 2nd Master acts also as Superintendent of the boarding-house on an extra allowance of

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Education and Literacy

Industrial School at Muzaffargarh.

Rs. 3 a month. No fees are charged and the poorer boarders are fed at the expense of the District Fund. The school and boarding-house buildings are not suitable, and Rs. 5,000 have been sanctioned (Rs. 4,000 to be met from Government grants and the balance from the District Funds) for the erection of a suitable building for the boarding-house. The school gets orders for the preparation of wooden furniture and appliances, such as tables, chairs, boxes, almirahs, etc., for schools and offices. A scholarship of the value of Rs. 7 a month is awarded every alternate year to a boy from this school, who may be willing to prosecute his studies further in the Mayo School of Arts at Lahore. The monthly cost of maintaining the school is about Rs. 90 which is met from the District Funds. The boys attending the school are generally sons of artizans and workmen. The boys from suburbs also attend the school and the free boarding is a great boon to them.

Anglo-Vernacular Middle School, Alípur.

The school at Alípur teaches boys up to the Anglo-Vernacular Middle standard and prepares them for admission into a High School. There are 137 boys on the rolls. About 4 or 5 boys pass the Anglo-Vernacular Middle examination every year from this school. The school is suffering for want of a duly qualified staff. The sanctioned pay of the Head Master (Rs. 50) is insufficient to attract a certificated teacher of sufficient ability. The school has got a small library for the teachers and boys. The school building is adequate. The school has also a boarding-house attached to it and the number of boarders is 25. There are 8 teachers working in the school and the total monthly expenditure on the school is about Rs. 200 which is met from the Municipal Funds.

Vernacular Middle School, Kot Addu.

The Kot Addu school is a very useful institution, as it provides vernacular teachers for Primary schools in the district. Some 230 boys attend the school and 15 or 16 pass the Vernacular Middle examination every year. The staff is efficient, and the number of teachers serving in the school is 7. The monthly expenditure on school amounts to about Rs. 122. The school building is rather too small to accommodate all the classes. The boarding-house has 20 inmates.

The details of expenditure on the schools are given below for the year ending September 1906 :—

Section.	High School, Muzaffargarh.	Other School.	Total.
	Rs.	Rs.	Rs.
Provincial Funds	1,205	2,867	4,072
District Fund	...	22,029	22,029
Municipal fund	...	1,234	1,234
Fees	4,909	797	5,706
Subscriptions and other sources ...	...	270	270
Total ...	6,114	27,197	3,311

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Medical.

The Muzaffargarh High School is largely self-supporting, out of Rs. 6,000 odd spent annually on it nearly 5,000 being recovered in the form of tuition fees. The remainder is met from Provincial Funds. The item of fees is only nominal in the other schools and they are supported mainly by the District and Municipal Funds.

Native press and publications.

There is no printing press in the district nor has any publications been registered.

Section J.—Medical.

Dispensaries.

Besides the Civil Hospital at Muzaffargarh there are seven dispensaries in the district, *viz.*, at the municipal towns of Khangarh and Alípur and at Kot Addu, Sanáwán, Rangpur, Sitpur and Jatoi. No indoor patients are admitted to the Sitpur dispensary. In the other dispensaries there is accommodation for in-door patients—male and female. In the Sitpur dispensary no regular wards have yet been built and only temporary shelter is going to be provided for in-patients. The Muzaffargarh Hospital is in charge of an Assistant Surgeon, and a Hospital Assistant is ordinarily posted to each of the other dispensaries. The whole department is under the Civil Surgeon of the district who is usually an uncovenanted officer. The following table gives the statistics of patients treated and surgical operations performed during the five years ending 1905 :—

Year.	Patients treated.	Surgical operations performed.	Remarks.
1901	85,673	3,069	
1902	83,858	3,451	
1903	1,02,431	3,547	
1904	93,091	3,598	
1905	91,917	3,504	

The figures of average daily attendance are given by dispensaries in Table 53 of Part B.

The attendance at the hospitals is fairly large, but nevertheless the rural tracts have to depend for treatment upon local *hakims*, quacks or upon rough and ready methods. Owing to the abundance of moisture in the district caused by the vicinity of the rivers and to the flow of the inundation canals in the summer, the health of the district as a whole is not very good. Malarial fever is very common. Cases of stone in the bladder are numerous

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Medical.

Dispensaries.

and cataract is not rare. Skin diseases are a peculiar feature of the district and venereal diseases prevail to a shockingly large extent. The eye affectations are obviously due to frequent dust-storms in the summer, and skin diseases to dirty habits.

The income and expenditure on dispensaries is noted below—

Year.	INCOME.		Expenditure.
	Municipal Fund.	District Fund.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1901	3,369 9 11	8,602 4 0	11,971 13 11
1902	2,799 0 11	12,724 7 4	15,523 8 3
1903	3,481 3 5	564 8 6	12,045 11 11
1904	3,614 0 0	10,054 0 0	13,668 0 0
1905	5,750 0 0	8,101 0 0	13,851 0 0

Lunatic and Leper Asylum.

There is no lunatic or leper asylum in the district.

Vaccination.

Vaccination is not compulsory in any part of the district, but it is getting more and more popular every day.

From 3 to 4 per cent of the total population are vaccinated every year. The work is carried on by vaccinators appointed for the purpose under the supervision of the Civil Surgeon. The cost of the operations comes to Rs. 1,800 or 1,900 a year.

Village sanitation.

Outside the municipal towns there are no special arrangements for sanitation. In larger villages, the lambardárs usually exert their influences in having the place kept clean and are often encouraged by certificates and other rewards. The ordinary villages are, however, as dirty as ever.

Sale of quinine.

There is no arrangement for sale of quinine at times of prevelance of malarial fever. Quinine is however distributed free through tahsildárs and lambardárs.

Indigenous methods of treatment.

The towns and large villages usually have a druggist's shop which supplies native drugs; and where there is no *hakim* the druggist himself prescribes the drug or syrup suitable to the ailment. The commoner methods of treatment adopted by the masses outside the large villages are :—

Starvation for fever and diarrhœa; purgative by *girdnalli* (the Amaltas of Central Punjab) *cathartocarpus fistula*, when the patient feels heavy in the stomach or has constipation, *ghi* (clarified butter) being also drunk in large quantities by way of a purgative; leeches and bleeding for impurity of blood; salt and *jawain* (Ptychotis Ajwain) for stomach-aches and indigestion.

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Medical.

The barber is the local surgeon always ready to bleed a patient by cutting open a vein in the appropriate place. The operation is called 'Tukka' or cutting.

Indigenous methods of treatment.

The rule of health prescribed by indigenous medical authority is as follows:—

Chetr Vaisákh Ghumme.
Jeth Hár sumhe.
Sáwan Badra dhawve.
Assú Katten thola kháwe
Tabíbán pás na jáwe.

Wander about in Chetr and Visákh (March to May), sleep in Jeth and Hárh (May to July), bathe in Sáwan and Badra (July to September), eat little in Assú and Katten (September to November), and you will not have to visit a doctor.

CHAPTER IV.—PLACES OF INTEREST.

CHAP. IV.

Places of Interest.

General statistics of towns.

At the last Census, all places possessing more than 5,000 inhabitants, all municipalities, and all head-quarters of districts and military posts were classed as towns. Under this rule the following places were returned as the towns of the Muzaffargarh District:—

Tahsil.	Town.	Persons.	Males.	Females.
Muzaffargarh ...	Khángarh ...	3,621	1,930	1,691
	Muzaffargarh ...	4,018	2,389	1,629
Alípur ...	Khairpur ...	2,257	1,192	1,065
	Alípur ...	2,788	1,487	1,301

The distribution by religion of the population of these towns and the number of houses in each are shown in Table No. 7 of Part B of this Gazetteer. The remainder of this Chapter consists of a detailed description of each town, with a brief notice of its history, the increase and decrease of its population, its commerce, manufactures, municipal government, institutions, and public buildings, and statistics of births and deaths, trade and manufactures, wherever figures are available.

Khángarh Town.

Khángarh is a small town of 3,621 inhabitants situated on the main road of the district leading from Muzaffargarh southward at a distance of 11 miles from the latter town, and a mile or so from the high bank of the river Chenáb. The land around it is well wooded, fertile, and more highly cultivated than any other land in the district. It was originally (in 1849) the head-quarters of and gave its name to the district, but it was found liable to inundation from the Chenáb, and was given up in 1859 in favour of Muzaffargarh. The town is little more than an ordinary village compactly built, chiefly of brick with one principal street running north and south, from which narrow lanes branch off to the east and west. The main streets and lanes on the western side are neatly paved with brick. The plan of the town very nearly corresponds with that of Muzaffargarh, having had a similar origin. Like it, it was a stronghold of the Afghán Government at the beginning of last century, and was built by Khán Bibi, sister of Nawáb Muzaffar Khán, from whom it takes its name. The place was given to her in dowry by her father Nawáb Shuja Khán, founder of Shujabad. She was married to Rabnawáz Khán, a Saddozai. The family has become extinct. The town has outgrown the dimensions of the circular fortification which originally enclosed it, and which is now surrounded on all sides by mud buildings. There is a grain market, a primary school, a *thána*, a rest-house and a dispensary. A new school

CHAP. IV. — Places of Interest. — Khángarh Town.

building has been erected south of the town. It is the residence of the Honorary Magistrate and Honorary Extra Assistant Commissioner Khán Bahádur Muhammad Saifullah Khán. The Municipal Committee consist of six elected and three nominated members. There are no manufactures, and the town owes any importance it possesses to its being an agricultural centre in a fertile tract. A cotton ginning factory has just been started outside the town on the Alípur road and a bazar is springing up there.

Census.	Population.
1881	3,417
1891	3,505
1901	3,621

The population as ascertained at the last three censuses is shown in the margin. The town is a growing one although the progress has been slow. More than half the population consists of Hindus, the strength of Hindus including Sikhs being 545 to 455 of Muhammadans *per mille* of population.

Muzaffargarh own.

The town of Muzaffargarh lies in north latitude 30° 4′ 30″ and east longitude 71° 14′ and contains a population of 4,018 persons. It is situated on the road from Multan to Dera Gházi Khán, two miles from the extremity of the riverain tract of the Chenáb, at the end of a well known *shísham* avenue 5 miles long leading from the river, within a triangle formed by the Ganeshwáh, the main road leading to Alípur which lies to the west, and the Dera Gházi Khán road which passes it in a north-westerly direction. The country round to the east of the Alípur road is intersected by many watercourses, is fertile, well wooded, and abounds in groves of date palms. Emerging on the Alípur road and looking across a plain of tall grass, with here and there a date palm, one gets glimpses of the *thal*, that wilderness of sandhills and scrub, and in clear weather sees the outline of the Sulimán range beyond. The public buildings and the houses of the European residents are mostly ranged along the Alípur and Dera Ghází Khán roads, which intersect at a point a quarter-of-a-mile north of the town. The town consists of a fort formed by a circular-shaped wall thirty feet high, enclosing a space with a diameter of 160 yards, and of suburbs surrounding the fort on all sides, so as to nearly conceal it from view. The fort wall has 16 bastions, and battlements all round. It has been built with a veneer of burnt brick which has peeled away in many places, and a backing of mud over 6 feet thick. The road from Multan entering the town cuts off a segment at the north end of the fort, which is bisected by the main *bazar* running north and south. The houses within the fortification are built with burnt bricks where they face the street, but elsewhere generally with mud. They are chiefly occupied by Hindus. The suburbs round the fort are generally mud built. They are more extensive on the south side, where they are occupied by the poorer Muhammadans. On the north side they are occupied by the district officials. The principal streets have been paved with brick. Drinking water is

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Places of Interest.

Muzaffargarh Town.

obtained from wells outside and inside the town. The Railway Station has been built half a mile north of the town. The origin of the town was a Bania's shop called Músan Hatti, from the name of the owner, established to supply provisions to travellers on the road between Multan and Dera Gházi Khán. About 1794 Nawáb Muzaffar Khán, the Afghán ruler of Multan, began building the fort, called accordingly Muzaffargarh, and in 1796 he established his head-quarters in it. It was stormed by the army of Ranjít Singh in 1818. It became the head-quarters of the district administration under the British Government in 1859, after Khángarh had been abandoned in consequence of inundation. The floods of the Chenáb used to approach Muzaffargarh, and in 1873 and 1893 they destroyed a considerable portion of the suburb. Midway between the town and the Railway Station lie a cotton-ginning factory and cotton press. The District Courts are situated immediately north of the Multan-Dera Gházi Khán road.

The municipality of Muzaffargarh was first constituted in 1874. It is now a municipality of the second class. The Committee consists of three *ex-officio* and six elected members. The building of the railway and the proximity to Multan interfere with the function the town would otherwise perform in the collection of agricultural produce and the distribution of European goods. There is no building in the town of architectural or antiquarian interest. Nawáb Muzaffar Khán had his residence in the south-east of the fort, near where the grain *mandi* now stands. Public business was at first transacted there after Muzaffargarh became the head-quarters of the district. The garden known as the Taliri on the banks of the Taliriwáh, now *nazúl* property, at the end of the avenue, a mile long, leading eastward from the town, was Muzaffar Khán's garden, and contains old *shísham* and other trees said to have been planted by the Nawáb. It yields an abundance of mangoes and other fruits. The public buildings are the *kotwáli* or police station within the town, an old building of Sáwan Mal's time, the high school with boarding house outside the town on the west, the *sarai* and the combined Post and Telegraph office on the Dera Gházi Khán road, the church a little to the north of the town; the travellers' bungalow, and the dispensary, immediately west of the town; the district court, the sessions house, the police office and the treasury near the intersection of the Alípur and Dera Ghází Khán roads; the Tahsil, the Munsiffs' courts, the Police Superintendent's bungalow and encamping ground further on on the Dera Ghází Khán road and the gaol about a quarter-of-a-mile to the north of the court-house. The Deputy Commissioner's residence and the Canal Engineer's residence and office are both Government buildings. These as well as the Police lines also lie on the Alípur oad. The town hall and the garden attached to it were estroyed by the flood of 1893. A Victoria Memorial Hall has

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Places of Interest.

Muzaffargarh Town.

however been built by private subscription. The population as ascertained at the enumerations of 1881, 1891 and 1901 is shown in the margin.

Census.	Population.
1881	2,720
1891	3,642
1901	4,018

The town is growing both in dimensions and population.

Khairpur Town.

The town of Khairpur, with a population of 2,257 persons, is situated seven miles to south-west of Alípur, and is about equi-distant from the Indus and Chenáb. It was founded about 70 years ago by Khair Sháh, a Saiyad Bukhári, from whom it takes its name. It is compactly built chiefly with brick, many of the houses being two and three-storeyed. The *bazars* are mostly paved with brick, but the streets are much too narrow to admit of any wheeled traffic. The principal streets have matting spread over them as a protection from the sun, as is usual in these parts. Much of the land in the neighbourhood is waste and covered with tall grass. The country round was liable to submergence in the floods, but an embankment, five miles in circumference, was constructed at considerable cost, to protect the town, and the protective embankment of the Sulemán canal has minimized the chances of inundation of this tract. In the old days boats laden with produce used to pass from Khairpur to all the towns around Jatoi, Alípur and Sitpur during the floods, and the people of the town had more trade with Biluchistán and with Sukkar, Multan, and other towns at a distance, than any other town in the district. Owing to diversion of traffic from the river to the railway and the town being cut off from the river, the place is dwindling into insignificance as a trading centre. Khairpur has a primary school. There is a *thákardwâra* sacred to Gopi Náth, and a community of river-traders has propitiated the river lord (Daryá Sáhib) by building him a temple. The Municipal Committee consists of two *ex-officio* and six nominated members. The municipality is a poor one and will perhaps have to be abolished. The population, as ascertained at the last three censuses is shown in the margin. The decline of the town has been continuous and quite marked. More than half the population are Hindus.

Census.	Population.
1881	2,609
1891	2,424
1901	2,257

Alípur Town.

The town of Alípur, with a population of 2,788 inhabitants, is situated on the west side of the main road leading south from Muzaffargarh at a distance of 51 miles from the railway, 6 from the Chenáb and 15 from the Indus. It must be a place of some antiquity, judging from its height above the surrounding plain. It is said to have been founded by Ali Khán, one of the Náhar princes of Sitpur. Its importance is due to its being the head-quarters of a *tahsil* and also of a *munsiff*, and to its being an agricultural centre in a well cultivated tract. It has a considerable trade in indigo, and

CHAP IV. Places of Interest. Alípur Town.

snuff is manufactured for export to Dera Gházi Khán and Baháwalpur. The situation of the town is unhealthy, it being affected by the floods of both rivers, and there has been much excavation immediately under it on the eastern side. On this side are all the public buildings, the middle school, dispensary, *tahsil*, rest-house, and *sarai*. A new Munsiff's court has been built to the east of the town and a new Civil rest-house half a mile up the Muzaffargarh road. The town is compactly built, chiefly with brick, and most of the streets are well paved and provided with drains. Rude arcades have been formed in the principal *bazars* by stretching matting on beams from roof to roof. They protect from the sun, but are too close to be healthy. The Municipal Committee consists of six nominated and three *ex-officio* members.

The population, as ascertained at the enumerations of 1881, 1891 and 1901, is shown in the margin. The population has improved during the last decade. Out of every 1,000 of population 624 are Hindus or Sikhs.

Census.	Population.
1881	2,555
1891	2,552
1901	2,788

Shahr Sultán Town.

Shahr Sultán, a somewhat smaller place, is situated on the main road leading south from Muzaffargarh at a distance of 37 miles from it, 14 from Alípur and 1½ miles from the Chenáb. The town takes its name from Sultán Ahmad Katal, father of Alam-ud-dín or Alam Pír, whose shrine is here. An account of the shrine and the fair held in connection with it has been given in Chapter I C. Any importance the town has is due to the shrine and fair. It is in all respects an ordinary village with mud buildings. One *bazar* is neatly paved with brick, and, as in all the towns in this part, beams are placed over the street and covered with matting, so as to form an arcade. A road branches off to Jatoi, and the position on the river is favourable for trade in country produce. There is a police *thána* and a primary school. The rest-house which had come down has been patched up. There is no building of any consequence at the shrine.

Sitpur Town.

Sitpur an old but small town, lies on the main road of the district 11 miles south of Alípur and 3 miles from the Chenáb. The highway ceases here, and becomes a mere bridle path which has however been improved of late years. The country around everywhere testifies to the violent action of the floods, and much of it is waste covered with tall grass and tamarisk. Owing to the floods, communication is often rendered very difficult. Matters are not half so bad now as they used to be, but still communication is sometimes completely cut off with the north although for a short time. Even through the winter months the ground in these parts is damp and chilly owing to the inundation. The town is built on irregular eminences of accumulated debris, which by their

CHAP. IV. — Places of Interest. Sitpur Town.

extent testify to its antiquity. It is in fact the only town of any antiquity in the district. According to tradition its ancient name was first Kanjan Mal, and then Khudi Bhir or hunting seat of Rája Khudi. In historical times Sitpur became the capital of a dynasty called the Náhar, an account of which, as well as of succeeding rulers, has been given in Chapter I B. The town is divided into two parts, the northern called the Khanáni, because occupied by the Náhar princes, their relatives and dependants; and the southern called the Shekháni, because occupied by the *makhdúms*, who succeeded the Náhars in the government, and their dependants. It is very irregularly built, and has a very dilapidated appearance. Many of the houses are built of brick, and have two or three storeys. Two of the *bazars* have been paved with brick, and they are provided with the rude arcades of matting usual in these parts. The town is completely shut in on all sides by a thick screen of date palms, which must add considerably to the insalubrity of the climate. The dates of Sitpur are noted throughout the district, being of the kind called *najábat.* The only building of antiquarian interest is the tomb of Táhir Khán Náhar at the west end of the *bazar*. The dome is covered with blue encaustic tiles, and the walls of the building are ornamented with tiles of various colours. There are a *thána*, school, and police rest-house. Sitpur has the usual trade of a small agricultural centre. In former times there was a considerable manufacture of paper, but the industry has died out. The *kamangari* work of Sitpur, consisting of a sort of painting over varnished wood or paper, has also practically disappeared.

Jatoi Town.

Jatoi is a large village situated 11 miles north-west of Alípur, and 4 miles from the river Indus. It is formed of two villages called Bara and Chhota Jatoi, standing end to end with a main *bazar* running north and south, Chhota Jatoi being at the north end. The town is said to have been founded within 100 years by Ali Khan Jatoi. The *bazar* of both the villages is well paved with brick and like the other towns in Alípur by matting spread over it, it forms an arcade. It is a place of very little importance. There are a police *thána* and rest-house, and the canal department have also an excellent rest-house here. Sirdár Kaure Khán Jatoi, the leading man of the place, who died sonless, bequeathed one-third his property to the District Board, and a dispensary has been built out of the proceeds of this estate. Two scholarships to be held primarily by Biloches, prosecuting their studies in one of the Arts Colleges have also been founded out of the fund. A dispute arose with the heirs of Sirdár Kaure Khán, but eventually the case was compromised, the District Board conceding one-sixth of its share to the other party. The District Board therefore now owns $2\frac{1}{2}$ shares out of 9, *i.e.*, $\frac{5}{18}$ths. The property is managed by the Deputy Commissioner on behalf of the District Board.

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Places of Interest.

Kot Addu Town.

Kot Addu is a large village, with narrow lanes and mud built houses. Any importance it has is due to its being an agricultural centre, a halting place to travellers marching along the left bank of the Indus, and the largest village in the Sanáwán *tahsil*. It was formerly the head-quarters of a *tahsil*, which, in the first instance attached to the Leiah district, was transferred to Muzaffargarh in 1859. The head-quarters of the present *tahsil* were moved to Sanáwán in 1872. It is situated on the east side of the road from Muzaffargarh to Dera Ismail Khán, 33 miles from Muzaffargarh and 10 miles from the river Indus. It is said to have been founded by Addu Khan, a son of one of the Gházi Kháns. Its name indicates that it was at one time a fort, but no trace of fortification remains. It is now an important railway station. There are a police rest-house and out-post, a vernacular middle school and a dispensary at this station.

The place is known for the manufacture of bows and arrows of which an account has already been given in Chapter II E. The bows are very pretty.

Daira Dín Panah Town.

Daira Dín Panah is an important village. It is situated on the west side of the road from Muzaffargarh to Dera Ismail Khán, 7 miles north of Kot Addu, and 5 miles from the river Indus. It is a railway station. Its importance is due to the shrine of Dín Panah, a Bukhári Saiyad, who died A.H. 1012, and to the visits of pilgrims to the shrine, an account of which has been given in Chapter I C.

There is a dismantled fort to the south side of the town built by Abdul Samad Khán, Badozai, an Afghán chief, of the time of Nawáb Muzaffar Khán. There are a police *thána*, a District Board rest-house, a primary school and an encamping-ground.

Munda.

Munda is the largest village in the Thal, although it cannot boast of more than a hundred houses altogether. Its importance lies in the fact that it is the only place in the Thal where there is a police rest-house of sorts and a police post. There is a mud fort built in the time of the Nawábs and now falling into debris. The police post and rest-house are situated inside the fort. The place is infernally hot during the summer and a term at this post is looked upon by members of the Police force as the worst punishment. There is a saying "Chún Shahr Munda Sákhti Dozakh chira pardákhti": meaning when you (O God) made the city of Munda why did you create the hell.

Rangpur.

Rangpur is the largest village at the extreme north-east of the district, adjoining the Jhang district. It is called Rangpur Kheriánda. It is a sub-tahsil of Muzaffargarh and has a police station, a police rest-house, a canal rest-house, a dispensary and a primary

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Places of Interest.

Rangpur.

school. It is the largest village in the neighbourhood and is a trading centre both for the tract adjoining the Chenáb and for the eastern half of the Sanáwán Thal. The lands are productive and well wooded. The place is well-known for the famous story of Hír and Ránjha, which was enacted here. Hír, a Siál Jatti of Jhang Siál, was given in marriage to a Khera Jat of Rangpur quite against her wishes. Ránjha, a Dhido Jat of Takht Hazára, was in love with Hír and followed her in the guise of a *fakír*. He got initiated into the order and died a disappointed man at Rangpur.

PUNJAB

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